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POPULAR Computing WEEKLY

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Vol 5 No 1

Atari ditches DR programs

ATARI says it has scrapped plans to bundle Digital Research's *GemWrite* and *GemPaint* with the 520ST.

"As a result of Digital Research's failure to supply us with satisfactory product we will instead be supplying two different programs," said Rob Harding, Atari UK's sales and marketing manager.

"We feel we cannot keep our customers waiting any longer."

He added, "As far as Atari is concerned, it's permanent."

However, a Digital Research spokesman responded, "The contract is not cancelled and the alternative programs will be provided as a temporary substitute."

A meeting between the two companies took place as *Popular Computing Weekly* went to press.

GemWrite's substitute is *First Word*, a word processor package from Cambridge company GST. "It has a full windowing facility and is of a similar standard to *GemWrite*," Rob Harding commented.

The second program is *DBMaster1*, from Stoneware, a US firm. "We chose a database program in place of

continued on page 4 ▶



Ultimate's latest

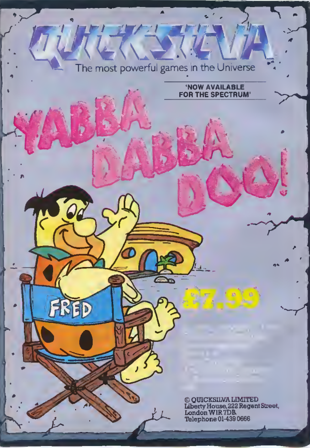
GUNFRIGHT is Ultimate's latest pictured above – its first for the Spectrum since Nightshade, which received mixed reviews.

Gunfright uses similar graphic techniques to Nightshade to depict a Western town. Game theme is to seek out an assortment of villains to earn reward money.

The game features gun fights and a pantomime horse – worn around the waist by you brave gunfighter.

Gunfright costs £9.95 and is released this week. See page 44 for more details.

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Vol 5 No 1

EDITORIAL

If Amstrad can make a go of its 6128 and 8256 in the US, it will be the first British company not to retreat from the States bruised and scarred. Sinclair and Acorn have both tried for success Stateside Sinclair's royalty deal with Timex backfired The 're-jigs' done to the Spectrum to turn it into the Timex led to long delays and software incompatibility Commodore and Apple beat it to the mass market Sinclair was knocked out.

Acorn's expensive attempts to make an entry into the US educational sector was comparable to a complete American unknown trying to break Acorn's own strength in British schools. Acorn retired hurt. The recent re-entries by these two are much more cautious

Amstrad, on the other hand, is doing things on a much louder scale – a full blown distribution deal for the 8256 with Sears World Trade. And Amstrad claims it is not a penny out of pocket for doing so.

But surely Amstrad is being somewhat optimistic in planning for FCC approval by the end of February? The FCC tests have already held the 6128 up since September That apart will Americans, used to paying over £1 000 for a micro for serious use, dismiss the 8256 – and for that matter the 6128 – as a toy at under $800?

The very nature of Amstrad's deal gives it a better chance than Acorn or Sinclair If Plan A succeeds to Amstrad's liking – and it's only looking for 10,000 per month initially – then it will be fascinating to watch Plan B, its no-holds-barred desktop PCs, unfold.

This seems like a good opportunity to wish all our readers a very Merry Christmas and a Happy New Year from all of us at *Popular* We'll be back on January 9

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How to submit articles Articles which are submitted for publication should not be more than 2000 words long The articles and any accompanying programs should be original It is breaking the law of copyright to copy programs out of other magazines and submit them here — so please do not be tempted **Accuracy** *Popular Computing Weekly* cannot accept any responsibility for any errors in programs we publish, although we will always try our best to make sure programs work.

Computer Trade Association Magazine of the Year

Atari ditches DR programs

◀ continued from page 1

GemPaint, because we have found that many STs sold are going to small business users," explained Harding.

Atari has added two more programs to the 'bundle' *Doodle*, a graphic package and *Megaroids*, an *Asteroids* style arcade game.

It is not entirely clear what has caused the delay in *GemPaint* and *GemWrite*. A source at Digital Research said, "The products are coming and there is no technical problem with conversion to the 68000. But they're not yet at a stage where they can be supplied."

Present ST owners will apparently be supplied with the new programs by the dealers who sold them the machine. New owners should get the packages with the machines they buy.

These titles are intended to stay on disc and will not be upgraded into Rom format.

GemWrite and *GemPaint* were intended to be supplied with the 520ST at launch, but have not gone out with any machines to date. However, the Gem operating system and Gem Logo, both also by Digital Research, are complete and will remain with the machine.

The Gem operating system is however due to available in Rom after Christmas. ST Basic and Gem Logo, Atari has decided, will now stay on disc rather than being upgraded.

Peripherals for C128 still scheduled in UK

COMMODORE has asserted that despite the non-appearance of the built-in disc drive version of the C128, the C128's Ram expansion up to a 512K, its mouse controller and the double sided 1571 disc drive, these products are still scheduled for the UK.

However, two products Commodore have displayed both in the US and the UK, an LCD portable micro, and a 3½ inch disc drive distinct from that used with the Amiga, have quietly disappeared.

The C128D is to be used in the larger part of Commodore's New Year thrust into small businesses for C128 technology, according to the company's UK marketing manager Chris Kaday. "It will be available, especially for business use. The price will be announced at the launch. The 1571 will be here soon at £269, although we are currently looking at our overall disc drive situation.

"The Ram expansion and mouse controller are under development. We are now aiming to have that product in 1986. While one can never say something will *definitely* happen, they are planned."

"As for the LCD portable and the 3½ inch disc drive," Kaday continued, "these were launched simply as showcase developments so that we could evaluate public reaction. We do not anticipate an imminent launch."

PCW 8256 joins 6128 Stateside

AMSTRAD has announced it is to sell the PCW 8256 in the US. The machine will join the 6128, which is distributed in the States by Indescomp (see *Popular Computing Weekly*, December 19).

However the main distributor for the 8256 will be Sears World Trade, part of retail giant Sears Roebuck, although Sears will be using Indescomp for part of the distribution.

Deliveries of the 8256 to the US will begin in February. The machine then has to undergo FCC approval tests before it can go on sale.

"We will be supplying them with 10 000 units per month to start with," said Amstrad's Malcolm Miller. "That number will grow, though I don't yet know by how much. To start with, we are putting our feet in the water – more than our toes, you understand."

Miller hopes that the machines will go on sale by early March, even though FCC approval has held the 6128 up considerably, the 6128 was originally intended for sale in September, and is still not in US shops.

The 8256 will cost $499 [about £350], which is cheaper than in Britain. "It is cheaper to supply the US from Korea [where the machine is manufactured] than it is to supply to Britain," Malcolm Miller explained. "Besides, we need to be competitive."

He added that Amstrad's deal with Sears is similar to that with Indescomp for the 6128 in that Amstrad has not invested its own finances in launching the 8256 in the United States.

The company hopes to follow the 8256 with other business machines but Miller declined to confirm that Amstrad would sell an IBM PC compatible in the US.

"I've no news on that. Mind you, any office equipment product would be nice to sell on the back of the 8256."

Scooby Doo scrappy-dooed

ELITE has decided to halt development on its Spectrum game licensed from the TV series *Scooby Doo* (see *Popular Computing Weekly*, September 19).

"We kept running out of memory, and what we had was clearly not big enough for a commercial product. Now we're reconsidering how to approach it, and we will be starting again, and will rewrite a new game," said Elite's Steve Wilcox.

High street problems for Enterprise

ENTERPRISE is looking at the possibility of bundling deals or price changes on its 64K and 128K machines, following problems getting its machines into the shops. Distribution of the Enterprise 64 and 128 by the company's distributor TBD has been halted.

"It's an interim thing," said Enterprise's commercial director Mike Shirley. "TBD had difficulties distributing the product because we were not going into the major multiple stores. The independent retailers also found it difficult to market product that was not stocked in the high street."

He said that Enterprise and TBD would meet for fresh discussions next year. "We have proposals for the New Year, and new hardware we are working on. 1985 has been a difficult year.

"The high street is selling more and more of the hardware, and we must devise a strategy to get into those multiples. We will look at bundling deals, pricing, in fact, the whole marketing mix," he concluded.

Enterprise – having difficulties

Brataccas emerges for 16-bit micros

BRATACCAS, the game by Imagine ex-megagame team, which was one of the Atari ST's chief attractions at the PCW show, should be available within the next couple of weeks.

Three versions are ready, for the 520ST, the 512K 'Fat' Mac, and the 512K expanded version of the Amiga. This last was initially intended for the US market.

Brataccas on Atari 520ST

The game features you as Kyne, unfairly convicted of crimes against humanity in a distant galaxy, and fighting to clear your name. So far your search for evidence in your favour has taken you to Brataccas, an asteroid, where the game begins. From there you are on your own.

The package cost £34.95. No conversions to other machines are yet planned. Further details from Psygnosis, 1st Floor, Port of Liverpool Building, Pier Head, Liverpool L3 1BY.

Multi-player Starnet out at last on Micronet

MICRONET has finally launched a finished version of *Starnet*, its multi-player adventure game which is now running on the Prestel database. The game was originally announced two years ago.

The game was originally designed by Mike Singleton, who wrote *Lords of Midnight* and *Doomdark's Revenge* for Beyond Software. However his version, which was up and running for a short while, was closed and the software rewritten by a Micronet member, Lawrence Kirby.

Starnet can be played by up to 500 Micronet users at one time, and its plot is based around a space war scenario. The players, as Star Captains, must challenge, attack or ally themselves with the other players to pursue the ultimate goal: control of the galaxy.

Micronet members can find details of *Starnet* on page *800030#. Others should contact Micronet at 8 Herbal Hill, London EC1 (01-278 3143).

Starnet has, however, beaten MUD (Multi User Dungeon, now under the aegis of British Telecom) to the databases. While a special test version of MUD is available to those who have already bought Mudpacks, it will not be officially open until "sometime in the New Year," according to Trevor Havelock of BT's New Information Services.

BT denies Ultimate takeover

BRITISH Telecom has denied that it is about to complete a takeover of Ultimate Play the Game.

Responding to reports in the trade press, Dr Ederyn Williams, general manager of New Information Services, which runs BT's software divisions Firebird, Rainbird and Beyond, said, "We have a reasonably close relationship with Ultimate, having converted a number of its titles for the Commodore 64. We have also had discussions with them about the possibility of taking the relationship further, but Ultimate decided that it would prefer to remain both a publishing house and a programming house, rather than just a team of programmers.

"I would therefore be very surprised if we or indeed anybody else, did buy Ultimate."

Letters

More discs please

I would like to say a few words to software houses on the question of disc software. My main point is price: disc-based programs are far too expensive.

Also, I think more games and other programs should be available to disc users. Many more computer owners are now disc drive owners too.

I have been hoping that "budget" software champions like Mastertronic, Firebird etc would come up with the goods, but no luck so far.

James Lyons
Moston, Manchester

Lenslok lament

After reading various complaints about the difficulties with the Lenslok system, I have to agree that it is very much a hit-or-miss affair to get a program running with certain TVs.

When I first bought *Elite* for the sum of £14.95 I cannot say I was altogether pleased when, after waiting about five minutes for the program to load, I then failed to get the correct code and the machine reset itself.

Also, what happens if that flimsy, plastic Lenslok gets broken?

I would just like to say to software manufacturers that in future I will definitely think twice about buying any software using the Lenslok system.

Robert Archer
Teddington, Middlesex

A finer hour

I was interested and gratified to read Peter Berlin's enthusiastic review of *Their Finest Hour* (*Popular Computing Weekly*, 12-18 December), but there are a couple of points arising from it.

The first is that the minor bugs referred to in the review have been eliminated from the production version of the game – they were present only in the pre-release version. Second, the price of the game, which was quoted as "£0.00" in the review, is in fact £9.95.

Mark Slade
Century Communications

Quill quirks

Back in November you published a letter from N R Wild, of Broseley concerning the retrieval of a Quill database that had accidentally been saved as an adventure. There is a solution to this although it requires a disc drive.

The "save adventure" option saves three files to tape or disc, the third of which is the database but this cannot be loaded back as the filename is in the wrong format: upper case letters preceded by a reversed 'b', whereas the Quill requires a reversed 'd'.

This is easy to change with a disc doctor which allows you to alter bytes on the disc. If Mr Wild does not have a disc drive or the necessary software, I will be happy to do this for him.

Gareth Kitchener
43 Coleridge Close
Hitchin, Herts SG4 0X

More Word ways

Some additions to my Wordway program published in Vol 4 No's 37-38. If you don't have a DFS fitted, omit Lines 0-40 and 1470-1520. Finally, although not designed on the Electron, it should run if Line 240 is also changed to *If G=126 Proc1 Goto210*, and Line 1450 changed to include that fact that Ctrl/top right hand key (the 'squiggle') now indents paragraphs, not Tab.

Malcolm Smith
Welshpool, Powys

In *Popular Computing Weekly's* Bulletin Board survey, issue dated 12-18 December, we printed BelTen's number as 0493 781334. This should have read 0473 781334.



	AMSTRAD	BBC/B	CBM 64	EINSTEIN	SPECTRUM	QL
CLUEDO	JAN 8	JAN 86	*		*	FEB 86
MONOPOLY	JAN 8	*	*	*	*	FEB 86
SCALEXTRIC	FEB 86		* †		JAN 22	
SCRABBLE	*	*	*	*		*
RRP cass	9.95	12.95	12.95		9.95	14.95 (cart)
disk	14.95	14.95	14.95	15.95		

The Popular Quiz

Other magazines have quizzes about your nervous strain, success in your career, and your sex life. We, on the other hand have the *Popular Computing Weekly* Ultra Quiz 'How Good is your Buff?' Not to be taken too seriously.

Answer the questions below as honestly as you can, turn to page 43 for the answers and tot up your score. Then you could try answering them dishonestly.

1 My idea of a good time is:
a) An all night session with my micro playing *Elite*. b) An all night session with my micro crunching numbers. c) An all night session with my mates crunching heads

2 I use my computer mainly for
a) Games b) Very complicated machine code c) Doorstop

3 When I play adventure games I:
a) Wear a pixie hat and shout "Hold hard there, Sorabim, keeper of the magic elm" b) Die in about three moves. c) Fall asleep

4 When I play arcade games I:
a) Hold joystick tightly, chew gum and say, 'Okay, let's blow these green gooks AWAY!' b) Forget to put defence screens on c) Wonder if I could snap them for an Airfix kit

5 My first computer program was.
a) 68000 multi tasker and Cray interface b) *What is your name? Input Brian Print "Hello Brian"* c) Copied from the manual and didn't work.

6 Who is Clive Sinclair?
a) A bearded electronics wizz who made bundles with the Spectrum. b) A famous literary figure who writes worthy books that win prizes c) That person who gave the weirdo answers in *Question Time*

7 Which company did Chris Curry work for before setting up on his own?
a) the BBC b) Sinclair Research c) Sinclair Radionics

8 What was the free gift offered by Sinclair to the first QL owners in compensation for the late arrival of their machines?
a) A 0.5 megabyte silicon wafer drive b) The Arcade Addicts Handbook c) An RS232 printer cable

9 When Amstrad launched the CPC 6128 in the US, the company said it would be launched in Britain when?
Was it a) August 20th, 1985 b) Early 1986 c) Never

10 Complete this adventure game title: Quest for the Mystic ...
a) Ring b) Orb c) Platypus

11 Without additional interfaces a Spectrum is incompatible with:
a) Any kind of joystick whatsoever b) Any sort of full size printer c) A decent Christian upbringing

12 Computer companies that take other computer companies to court are:
a) Simply protecting their legitimate interests b) Hoping the other companies won't be able to afford the legal expenses and will have to back down. c) About to go broke

13 The BBC B is:
a) This 'perfectly ordinary home micro' that is always featured on BBC TV computer programmes b) Overpriced and underpowered. c) Very big with lots of ports

14 Aquarius is:
a) An age that is dawning b) An astoundingly unsuccessful micro c) A star sign.

15 The best place to keep your micro is
a) On a smart teak 'computer console' desk available from Habitat b) Under the bed c) On the floor under the TV, on top of the video and surrounded by a mish-mash of cassettes, video tapes and last week's newspapers

16 What does an advertising agency mean by 'a massive 64K memory'.
a) An about average 64K memory b) A massive 41K memory c) 64K if you don't use any graphics, variables or Basic

17 ZX Microfairs are:
a) A lot of fun and a chance to catch up on all the latest for Sinclair micros b) Hazardous to the health c) Not known for the culinary heights they reach.

18 It is important to learn programming at school because:
a) Otherwise nobody will know how to work bank cash machines b) The future is going to be one big *Syntax error* c) The Conservative party are going to be in for a million years and it likes them.

Without any additional interfaces – Qu.11

19 Books about computers are:
a) Usually remaindered after about two weeks and then available much more cheaply b) Really useful. c) Useless because full of bugs.

20 Who makes the BBC B Micro for sale in this country?
a) The BBC b) Acorn c) Nobody anymore

21 Debugging is.
a) What happens to new bods at Eton b) A complex surgical procedure. c) Making programs that don't work not work slightly less.

22 Hermann Hauser is.
a) One of the Munsters b) Probably German. c) Probably still something to do with Acorn

23 An icon is.
a) A religious picture b) Any drawing of a wastepaperbasket drawn by computer c) Something you can play with on an Atari ST whilst there still isn't any software

24 Imagine is
a) A song by John Lennon that upsets some Americans b) Not the same company anymore thank God. c) The name of a software house that used to buy lots of shiny cars and whizz around Liverpool speaking into car phones

25 Hex/Decimal is:
a) The flamboyant lead singer with the Digits. b) Something nobody in their right mind really understands. c) Jolly interesting

26 Oric was
a) A character referred to by Hamlet. b) The name of the computer in *Blakes Seven*. c) A computer that appears in every single one of those computer cartoon books with the caption, 'Alas poor Oric'

27 Which newspaper tycoon offered to bail Sir Clive Sinclair out that summer?
a) William Randolph Hearst. b) Eddie Shah. c) Robert Maxwell

28 What was the name of Oric's proposed successor to the Atmos which was also known as the IQ164?
a) Stratos b) Old Spice c) Aramis

29 Which of these programs was a Llamasoft hit for author Jeff Minter?
a) Metagalactic Llamas Battle at the Edge of Time b) Hairy Yaks meet the Killer Tomatoes of Doom. c) Psychedelic Sheep Play a Selection of Hits from *Dark Side of the Moon*.

30 Which of the following were not once names for the Enterprise computer?
a) Flan b) Clan. c) Elan

31 What is LDS0?
a) A machine code instruction b) One of the early versions of the QL Rom. c) Illegal.

32 What is JM?
a) A machine code instruction. b) One of the early versions of the QL Rom. c) Illegal.

33 What is the name of Sinclair Research's portable project?
a) Penelope b) Pandora. c) Prunella. d) The C10

34 What is the name of the standard



One of the Munsters? – Qu.22

interface between micros and musical instruments?
a) Maxi b) Midi c) Maxi.

35 Which of these companies went bust and then did not emerge as a budget label?
a) Rabbit. b) Bug Byte c) Imagine

36 Educational Programs are:
a) The real reason I bought my computer, although I do actually play quite a few games, surprisingly enough b) A slightly worse way of learning things than a book c) A sure way of losing lots of money if you are a software house

37 *Elite* is:
a) The best space game ever b) Not available on the Dragon 32. c) Very hard.

38 Wafer Integration is:
a) A technical term for the problem you have keeping the ice cream in choc ices from splurging out the sides. b) A new data medium. c) A pipe dream

39 C5 is:
a) A defoliant the Americans deny using in Vietnam. b) Something the police may start using to keep the streets free from crowd congestion. c) Something Sir Clive Sinclair produced to keep the streets congested

40 The Amiga is:
a) "Awesome man" (Jeff Minter). b) Commodore's last hope c) Destined to intimidate insecure business users and too expensive for the home market.

41 The ZX81:
a) Has a lot to answer for b) Had great graphics, sound, keyboard and a reliable loading system. c) Gave rise to a lot of companies that have since gone bust.

42 How do you get out of the Goblin's Dungeon?
a) Build wooden horse b) Make smoke, shout Fire! Fire! and garrotte guard. c) Get Betely who knows a thing or two about uniforms, having worked as costume designer before the war to rig you up a Goblin uniform from old sheets Get Bradly who knows a thing or two about forging, having worked as a crook before the war, to forge Goblin identity papers Learn to speak in heavy Goblin accent and go out in empty red cross parcel.

43 What is Data?
a) What Italian language students ask the opposite sex for b) Digital information used by a computer c) The loud screeching noises which game cassettes make if you forget to plug the Ear lead in

44 How long is 'Allow 28 days for delivery'?
a) 28 days not including weekends. b) Eight months c) Slightly longer than a piece of string

45 What are other micros compared to the one you use?
a) Mere toys. b) Rubbish. c) More expensive

46 Complete this arcade game title ..... Bertie.
a) Bouncing b) Inconsiderate c) Fax

47 Who said, "The Japanese are coming . . . so we'll become the Japanese."?
a) Jack Tramiel. b) The MSX working group c) Yoko Ono.

49 A ziggurat is:
a) The Turkish word for cigarette b) An article appearing in the back of a certain weekly magazine c) A pyramidal Sumerian temple with terraced storeys.

48 Which licence did Elite acquire for a computer game, only to scrap the program three months later?
a) Snoopy b) Commando c) Scooby Doo

50 Which rating on Elite (the game) comes after Mostly Harmless?
a) Still Pretty Harmless. b) Partially Harmless. c) Poor

51 Commodore's new C128 disc drive is called:
a) 1542 b) 1601 c) 1570

52 What do you understand by the Word Basic?
a) A simple programming language b) Prehistoric c) Something, terribly nasty

53 Can you score over 100,000 on Defender?
a) Yes. b) No c) Only after three pints

54 The main character in 'Jet Set Willy' was named after who?
a) William Brown b) William Whitelaw c) Matthew Smith's Dad

55 What do the letters ULA stand for?
a) Uncommitted Liberal Activist. b) Unwanted Laser Attack. c) Uncommitted Logic Array.

56 The next CES show will be held where?
a) Las Vegas b) Chicago c) A padded cell somewhere near Albuquerque

57 A floppy disc is . . .
a) A hard disc that hasn't been watered recently. b) A flexible storage medium c) Very good as a frisbee substitute

58 Who was the author of the QL QDOS?
a) Tony Tebby b) Norman Tebbit. c) Norman Wisdom.

59 How many registers are there in a Z-80 chip.
a) 100010 b) 22. c) S18

60 What is the power output of a fully charged C5?
a) 60W b) 100W c) 250W

61 How many editions of *Popular Computing Weekly* have been published?
a) 206 b) Too many c) Your guess is as good as ours.

62 What is Clive Sinclair's middle name?
a) Marles b) Marx. c) Eric

63 What is Alan Sugar's middle name?
a) Killer b) Basher c) None of these

64 What is the predominant colour on the Dragon's display?
a) Green. b) Green. c) More green.

Design problems with Sinclair's portable – Qu.33

65 What is the favourite colour of most Dragon owners?
a) Green. b) Green. c) More green.

66 Which of the following has not been turned into a computer game?
a) Empire of the Senses b) Gone with the Wind. c) A View to a Kill

67 When a computer game is described as 'selling well', it is:
a) Selling well. b) Not yet in the shops c) Selling well to the Latin American market.

68 Which of the following fruits is not a computer?
a) Apple b) Apricot c) Raspberry

69 What would you call a suite of serious business programs?
a) Jane b) Lotus. c) The Data, Graphics, Word Processor, and Spreadsheet Program.

70 How well do you think you are doing so far?
a) I don't understand the questions b) I'd have liked more choices. c) Very well indeed

Now turn to page 43 and tot up your 'buff rating'.

Review of the Year

Expectations were high in 1985: grand predictions were made for the takeover of the 16-bit machine; Enterprise announced in June that it would be a 128K Christmas, and as the 128K machines began to trickle forth, great things were awaited for games running on them.

In fact, those expectations are still, largely, just that: expectations. The most-talked about micro in 1985 (the Amiga, for those who have been asleep for the last 12 months) won't be in the shops for at least another six months, and the most prominent new feature of many micros was CP/M, a ten-year-old industry standard. As for huge new games using 128K to its hilt, 1985 was far more the year of the licensing deal, and yet more sports simulations.

January

That well-known endangered species, the Lynx, briefly resurfaced; Anston Technology bought up remaining supplies from the defunct Camputers and announced its intention to breed them in captivity. Nothing has been heard of them since. Commodore and Atari displayed eight new computers at CES in Las Vegas, and little has since been heard of some of *them*. The eight were the C128 and LCD portable from Commodore, and 65XE, 65XEP, 65XEM, 130 XE, 130ST and 520ST from Atari. Just three survivors from that list.

Sinclair offered Spectrum owners a £30 upgrade to a Spectrum Plus, and the rubber-keyed version – by now commonly known as the Minus – was dropped. Sinclair Vehicles launched the C5 on top of a hill in North London on a snowy day, which did not do much to enhance the tricycle's supposed safety on the roads. There were rumours of problems at Prism and Acorn, and the publicity that the latter got in a *Sunday Times* article upset Acorn a lot. Chris Curry and Hermann Hauser spent a great deal of time saying they'd had a very good Christmas, thank you, but nevertheless they were still cutting the price of the Electron from £199 to £129.

Legend launched *The Great Space Race*, and almost immediately wished it hadn't. Rod Cousens began gathering software houses together for a compilation tape in aid of the Ethiopian famine.

February

Prism and Acorn fulfilled everybody's gloomy predictions of the previous month. Prism went into receivership, while in one dreadful week for Acorn the company split from Lazards, its financial advisors, made 31 redundancies, and had its shares on the Unlisted Securities Market suspended. The week after, it faced a winding-up order. Acorn finished February on a somewhat happier note, however, when the Italian giant Olivetti took a 49.3% stake for £10.39m. It looked as though Acorn's days in the home market were numbered.

There was bad news too, at Oric, which also called in the receiver, while Commodore cut the price of the Plus/4 to £149.99 from £299.99, as it announced disappointing financial results for the previous six months.

On a brighter note, the first whispers emerged that Amstrad was planning a disc-based version of the CPC464.

British Telecom made further inroads in the software market by taking on the Dungeons and Dragons game MUD, while its Firebird division took on Ultimate's *Sabre Wulf* and *Underwurlde* for conversion work.

March

Things quietened down a bit in March. *Soft Aid* was launched, to plaudits and goodwill throughout the industry. Commodore talked about a built-in disc version of the C128 and hinted we might see the Amiga launched this year. Acorn's shares re-opened on the Stock Market.

Sinclair held an exhibition in London to try to attract more software for the QL, and boldly announced its intention to set up a wafer scale chip manufacturing company. *Tir Na Nog* won the hearts of most games players, as did *Shadowfire*, from Denton Designs, while Firebird managed to make a saleable item from a compilation tape of its worst programs, entitled *Don't Buy This*. People did, in large numbers.

April

Atari began backtracking from the long list of XE products shown in January and struck the 65XE, XEP, XEM from the 'urgent' list, before launching the 130XE and 520ST to Europe at the Hanover Fair. IBM gave up on its only 'home' machine to date – the PCjr in the US. Tatung cut the price of the Einstein and sent it to Dixons for repackaging and a facelift. Commodore had the price of the C64 cut for them by several high street stores

Jack Tramiel – exuberant launch in January



European launch for the ST

and a number threatened to stop stocking it altogether.

Acorn reluctantly told people it would be launching an upgraded BBC machine – the BBC B Plus with 64K. Amstrad treated the launch of the 664 rather more flamboyantly.

It was an unhappy time for software houses – Bug Byte, one of the oldest companies, went into liquidation, and Automata's two founders split up. Better news for defunct Rabbit – Virgin bought its name to relaunch as a budget range.

And British Telecom launched a long-standing 'test case' against two modem users accused of 'hacking' into its Prestel network.

May

The BBC B Plus 64K was launched and received with lukewarm response from dealers.

Commodore announced a net loss for the third quarter to March, and chairman Irving Gould boldly reckoned there would be a loss at the year end. After categorically stating it would not cut the price of the Commodore 64, the company went about it a different way by bundling the 64 with goodies and retaining the £199 price point. Toshiba unveiled a new MSX micro, the HX-22, and confused everyone by saying this was not MSX 2.

Enterprise surprised everyone by being the first company with a Z80 128K machine, having been the last to produce the 64K version. Rumours that Sinclair would launch a Spectrum 128K started, and refused to go away. Apple dropped its Macintosh XL, Apricot (then called ACT) cut the price of its F1e and made it look a viable educational alter-

native to the BBC, while Atari came clean and said it would not be continuing development on a 130ST, but that the 520ST would be in the shops by September for £799.

Geoffrey Heath's first job since leaving Activision for Melbourne House was to announce a martial arts simulation called *Way of the Exploding Fist*. Beyond whooped with delight when it got the Superman licence, and US Gold promised all sorts of goodies with its Disney licence.

June

June was not the month Sinclair will care to remember. First it announced it needed between £10m and £15m to keep the company going, then said it was looking for a new chief executive to enable Sir Clive to become less involved in the day-to-day running. Two weeks later it was 'Bob's your Uncle Clive', as Robert Maxwell swept down from his charger to bail Clive out. Or so it seemed ...

Amstrad launched a 128K version of the CPC 664 at Chicago's CES, and staunchly claimed the 6128 was not destined for Britain until 1986. The C128 was shown for the first time over here, and the first 520ST development machines began to trickle through to software companies. Oric suddenly found itself in French hands as Eureka Informatique took it on. But Acorn's rescue hit a rock as its shares, yo-yo like, were suspended again.

Way of the Exploding Fist

US Gold was fast making up for our losing the American War of Independence by continuing to sign US companies at an alarming rate. With Epyx added to its list, how many more could there be? *Elite* appeared, courtesy of Firebird on the Commodore 64, and the follow-up to *Tir Na Nog*, *Dun Darach*, saw the light of day.

July

Atari announced another change of plan: now it would launch a 260ST after all. Sinclair also U-turned by badging a 3½-inch disc drive for the QL – software houses pricked up their ears. Russia ignored British attempts to sell it Spectrums, BBCs and Memotechs by ordering a consignment of MSXs. The Amiga was launched in the US, to acclaim, while here in Britain we had to make do with the launch of the C128. No sign of its built-in disc drive counterpart.

Amstrad came up against the BPI over its fast speed, twin cassette recorder. The BPI reckoned it was an incitement to copy. A lot of people were talking about CD Roms being the solution to all that sort of thing. The FAST bill, on the same subject, became law.

Sir Clive kept the bad news coming in with a writ from Hoover over debts relating to the C5 – it was taken out, but never served.

Frankie Goes to Hollywood eventually and warmly received – it didn't seem to matter that Frankie the group had had to make way for Madonna in the charts.

August

Acorn got rescued a second time – Olivetti upped its stake to 80%, and the shares went back on the market again. The company also found time to estimate a loss of £22m for the year and a breakthrough in RISC technology development.

Amstrad pleased one section of the micro industry with the launch of the PCW 8256 word processor at £450, and infuriated another by the introduction in Britain of the 6128, which inevitably led to the demise of the 664. The fact that 6128 was in the shops before its offical launch puzzled not a few people.

Bill Jeffrey, 'the man from Mars', took over as chief executive at Sinclair, and Robert Maxwell thought again about adding Sinclair to his empire. Sir Clive put a brave face on it and claimed he didn't mind really, because he'd just done a £10m deal with Dixons for the Spectrum. Then Sinclair cut the QL's price to £199 and hoped for a new lease of life. But there was no joy on the C5 front, production halted at Hoover's Merthyr Tydfil plant.

Budget games reached a new low of 99p from Central Solutions, Virgin took a leaf out of its record company's book and planned *Now! Games*, Firebird laid down the groundwork for entry into the US market.

September

The Personal Computer World show was acclaimed the most successful ever – over 70,000 people visited, and Atari and Amstrad battled for the most prominent stand. Atari showed over 50 programs in varying states of completion for the 520ST, while Amstrad's PCW8256 drew at least its fair share of crowds.

Commodore came up with new ideas for old C64s – another software bundling deal was announced. One Commodore executive admitted we were now seeing the death throes of the C16 and Plus/4, while the C128, plentiful enough at the PCW show, was conspicuous by its absence in the shops. Commodore also kept everyone on their toes by declaring that a new disc drive, the 1570, would replace the 1571, which replaced the 1541, which replaced the 1542.

Sir Clive – a traumatic year

Sinclair carried on blithely denying the existence of the Spectrum 128K, which a few optimists had thought might appear at PCW. Then it launched said machine in Barcelona, but declined to give a UK release date. Price cuts were also in evidence – the Macintosh down £500 and the Plus/4 and Toshiba's MSX went under the £100 barrier.

Ocean tied up a licence with alien showstoppers *V*, and The Edge brought out the acclaimed *Fairlight*.

October

The PCW 8256 and C128 appeared in the shops, and the BBC 32K disappeared. The Spectrum also disappeared, though only from Rumbelows. There were hints that Commodore planned to license the Amiga's custom chips next year, as Commodore recorded an annual loss of £90m. Amstrad turned in record profits and Acorn's loss predictions came true. Sinclair Vehicles went into receivership.

On the software front, British Telecom bought Beyond Software from EMAP, Mastertronic went upmarket – well, up to £2.50 – with *MAD* games, and Irish company New Concepts managed to find originality in a sports simulation, *Surf*

Frankie Goes to Hollywood

Review . . .

Champ, which used a miniature surfboard placed strategically on the computer. Apple decided that too much of Gem gave it *déjà vu*, and Digital Research accordingly amended it.

November

Acorn launched its Communicator competitor for ICL's One per Desk at Compec. Sinclair's 1986 plans became clearer – expect the Spectrum 128, a QL successor and a portable next year, all other things being equal. *The Sinclair Story* was published – Sir Clive, warts and all. Atari claimed the 260ST was being held up due to the British standard TV modulator. Commodore gave out launch dates for the Amiga in Britain. January's *Which Computer?* Show, and apparently in the shops by next June. This did not, however, prevent Commodore from announcing yet more losses.

It was a busy month for software companies. Beyond and US Gold clashed over *Superman*, and who was to manufacture it where. Rod Cousens, *Soft Aid* mentor, launched *I of the Mask* and tied up a *Back to the Future* licence for his new company Electric Dreams.

People were disappointed and nettled to discover that around £130,000 of *Soft Aid* money destined for Ethiopia had got no further than Hitchin, Herts, where it was in distributor Micro Dealer's account. Micro Dealer did the decent thing and paid up.

December

Sinclair joined Acorn and Commodore on the loss-making front, though on a lesser scale. £18.3m was all they could manage. Amstrad, still imperturbably profitable, was looking towards the PC compatible market for 1986.

Apricot decided the low end market was too hot to handle and stopped manufacture of the F1 and F1e. It was discovered that some C64 programs would not run on the C128 and the blame was laid at the door of some turbo loaders.

Two long, long-waited software packages made their first appearance: Mirrorsoft's *Fleet Street Editor*, initially running on the BBC, and *Lord of the Rings*, book 1, from Melbourne House. Most software companies were already planning their 1986 campaigns.

In 1986, we should see just what kind of market exists for the more expensive, upmarket machines, with the Amiga, Atari ST and the QL's successor. Can Sinclair pull back from a disastrous 1985? Can Amstrad continue its success? Will Jack Tramiel's Atari or won't it? Will Commodore turn around its recent losses in time? There is no reason to doubt there will be any fewer upheavals in 1986 than there were in 1985.


Sir Fred



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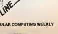
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Argie angst

Program *Falklands '82* **Micro** Commodore 64 **Price** £9.95 **Supplier** PSS, 452 Stoney Stanton Road, Coventry CV6 5DG

This game should sell very well for two reasons.

The first is that this is the only wargame released that I know of which deals with a scenario that most over five years old will personally remember. Up until now the subjects have all been ancient history or until the 2nd World War – definitely aimed at the minority hobbyist.

With *Falklands '82* PSS has gone for a contemporary subject.

The second reason is its playability, gone are all the fussy rules and movements usually associated with war simulations – instead are a collection of simple commands (usually yes or no in response to computer questions), a nicely detailed map (animated in places) and a straightforward instruction manual. There is a difficulty factory ranging from one to five, easy enough for the younger beginner and difficult enough for the enthusiast.

You begin the game by selecting (out of a possible fifteen) the number of ships to be used either for supporting land forces with gunfire or protecting and escorting the task force (the computer plays the Argies). Once this has been done you see a map of East Falkland Island and a possible four landing sites. It is here that could make or break your strategy, as places like Port Stanley and Berkley Sound are likely to be heavily defended whilst landing at San Carlos Bay would involve a hefty trek across inhospitable terrain. It was, of course, at San Carlos that the British Forces actually landed.

In order to be successful, the British must liberate all ten settlements before the end of 30 game turns (these are easily spotted on the map, along with symbols for mountains and rough).

PSS is building quite a pedigree with its Strategic Wargames Series. It still has a long way to go to get up to the American SSI standard but with *Falklands '82* PSS has a very competent piece of software.

Andy Moss

Ten tellies!

Program *Mercenary (Escape From Targ)* **Micro** Atari/Commodore 64 **Price** £9.95 **Supplier** Novagen.

Your first glimpse of the planet Targ is whilst plummeting towards its surface in your starship: luckily, you survive, but your troubles have just begun!

Now it's just you and Benson, your trusty interface with the outside world, against Targ. The planet is in the grip of a civil war between the once-peaceful Palyars and the usurping Mechanoids. You've landed near the major area of habitation and you must search the city and its environs for a spaceship to get you back home.

The game, written by *Encounter* author Paul Woakes, succeeds brilliantly on two levels. First as an adventure, you must find one a series of elevators that will lead you down to the city complex and which can be explored on foot. There are many objects to be found here, and you can pick them up and carry them to other locations.

On your wanderings, you will meet representatives of both warring factions, who will offer you, as a cunning mercenary, mucho dinari for your services. The problem is, if say yes to one, you turn the other against you.

You'll also come across several craft in hangars, of varying capabilities – these you can take up to the planet's surface in the elevators. And it is here that the game succeeds again, for the zapping is tremendous. Scattered about the landscape are dozens of huge edifices, from Forth Bridge to Natwest skyscrapers, from revolving Jodrell Banks to adverts for Atari and Commodore and *Encounter*, all in fast-drawn wire-frame. You can fly around in your nimble craft and blow most of them up with a well-placed missile but you run the risk of incurring the wrath of Palyars or Mechanoids, who will send up a fighter to teach you a lesson or two.

I've become entirely hooked on *Mercenary*: with its *Save Game* feature it's possible to return again and again to Targ and attempt to unravel its mysteries.

I'd really like to give it 10 tellies, but five's the maximum allowed, I'm afraid.

Tony Bridge

Horror story

Program *Friday The 13th* **Micro** Commodore 64/Spectrum **Price** £8.95 **Supplier** Domark, 204 Worple Rd, London SW20 8PN

Just listen to this. "This one you've been screaming for", "This game can seriously affect your wealth" and even, "Those who have seen the game are itching to get their hands on it and try to save their friends from the fiend", and so it goes on and on.

Domark, masters of marketing, are once again assaulting us with blurb on their latest release based on the movie *Friday the 13th*.

The game scenario (what there is of it) sets you as one of the holidaymakers at Camp Crystal where you try to find a safe sanctuary into which the monstrous Jason cannot enter and then get the rest of the characters to gather there before trying to find Jason and kill him. Littered about the few locations are various weapons. Find the cross that signifies the sanctuary room.

The graphics are poor by today's standards and the characters are little stick pieces which wander about all over the place as if they've already lost their heads to the killer. Where the "oodles of sound effects and speech" are hidden, only Domark knows, but apparently there are five levels and points for killing Jason, personally I lost interest after level 2.

Clever marketing won't disguise the fact that this is a poor game. Worth nearly £9? Not on your life, Jason.

Andy Moss

The peculiar and perennial preferences of Popular's personnel



CHRISTINA ERSKINE

The last year was definitely a year of violent vogues in software. First there was boxing – with Frank Bruno and Barry McGuigan landing their names to help boost the product. Then there was martial arts, with *Way of the Exploding Fist*, *Karateka*, *Chop Suey*, *International Karate*, *Yie Ar Kung Fu* and others too numerous to mention. Later in the year we have the *Commando/Rambo* style games all offering you the chance to pretend to be Sylvester Stallone.

Summer Games II and *Winter Games* were not so much looked upon as titles in their own right, but opportunities to 'complete the set', the original *Summer Games* having been released last year. The superb graphics and precision movement of the original were kept well up to standard; best played with about six friends, preferably those who hadn't practised as much as you.

Sorcery and the disc-based *Sorcery Plus* must have been a breath of fresh air to Amstrad owners desperate for better than mediocre conversions to the CPC range. And apart from looking nice, it was playable too.

On a more cerebral note, Serin software should not keep so quiet about its *Grand Slam* Contract Bridge simulation. In a year when Kuma, Alligata and CP Software all released Bridge simulations for a variety of micros, it seems a shame that so little is heard of the best of the lot. Okay, so there are no pretty graphics, no extensive rebid and tutorial options, and it's not the fastest program in the world.

But what it does do is play an extremely good game of Bridge. Which is actually what matters.

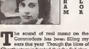
CRL mildly surprised most people with a rendering of the *Rocky Horror Show* that captured the pace and fun of the original – though of course it could never be the same without the tasteless bits.

The company then astonished everyone with *Tau Ceti*, easily its best game to date, a fiendishly difficult, graphically stunning, absorbing three-o'clock-in-the-morning affair.

But the program of the year for me was undoubtedly *Way of the Exploding Fist*. I don't think its music, catchy as it was, was the best I've heard on the Commodore; nor the graphics, good though they were, the most astoundingly realistic. What gave it lasting appeal was the playability, addictiveness, and, most of all, the aaargh!! ugh! and grooch! noises when you got thumped. And for that reason, aarghless owners of the Spectrum might disagree with it as a choice.

As for this year's 'Dodo,' I need only cast my mind back to the day *A View to a Kill* arrived in the *Popular Computing Weekly* office. After hearing of story boarders, game designers, special team of programmers *et al* employed by Domark, I was expecting something special. Well, something fairly special. Actually, even something marginally special would have done.

About the only good thing I can say about the Spectrum version of *A View to a Kill* is that I nearly died laughing when I heard its rendering of the Bond theme tune. I suppose it's only fair to say that this last is just as much the Spectrum's fault as anyone else's, although the game had little to commend in other departments.



GRAHAM TAYLOR

The sound of real music on the Commodore has been filling my ears this year. Though the likes of *Ghostbusters* indicated that the Sid chip, could, in the right hands, do some pretty clever things, 1985 has been the year of really great music soundtracks for the C64.

Bob Hubbard has been responsible for almost all of them.

It's probably mere coincidence that most of the games featuring Rob's work were also, in themselves, good games but whatever the explanation they form a large batch of candidates for inclusion in this round up. I'd pick *The Last V8* as my favourite Hubbard creation. That doom-laden, metallic music perfectly matched the plot of racing a souped up V8 through the devastated streets of a post-atomic world. Not only that, but the game was cheap too.

The other biggy for the Commodore was inevitably *Exploding Fist* – a martial arts game that spawned a host of inferior mutations. Everybody picks something different as their favourite aspect of *Fist*; personally I liked the fact that pre- and post-bashing each other's brains out the little fighters were so civilised to one another.

As a final offering on the Commodore I'd pick *Little Computer People* as a game which, infuriating as many people as it delighted, was totally original, superbly well programmed and a precursor to, I think, more exciting AI developments in the future.

On the Spectrum two of my favourites came from Gargoyle which, in its own low key way, has been producing consistently good games for ages now. *Marsport* continued the general themes and techniques used *Tir Na Nog* and *Dun Durach*, but had one big bonus – blasting things to bits. Since the things to be blasted were particularly nasty-looking insect-like creatures it proved a very satisfying experience.

Changing styles drastically, Gargoyle recently released *Sweevo's world*, a game that gets better each time I play it. It looks a little like *Alien 8* but features a totally bizarre plot, utterly stange settings and such unlikely dangers as giant fingers that shoot up through the floor to poke you. Weird, totally silly, wonderful.

Picked as a Spectrum title, but out pretty soon on everything under the sun is *Lord of the Rings*. Since it's an absolutely enormous adventure over two cassettes it's impossible to give it a final assessment until it's been around (and solved) for a while. However it's clear from early looks that it's substantial, features very complex language analysis and has captured at least some of the spirit of the book. Since the one package should keep everyone occupied for about four months (at least), I think that makes it pretty good value for all adventurers.

The BBC got *Revs*, easily the best racing game from a technical point of view, and *Sorcery* showed that the Amstrad was capable of more than some of the early conversions suggested. The QL still doesn't have a halfway decent arcade game but *The Pawn* is a staggeringly clever text adventure that actually looks like a 68000 processor is involved somewhere along the line.

A 'Dodo' needs to be more than merely a bad game, it has to be a very bad game pretending (by its packaging and promotion) to be a really good one. To my mind the juiciest Dodo is almost certainly *Friday the 13th* which, with future film tie up, pictures of members of Domark with their throats cut (wackyyy!) and sundry other promotional devices really built itself up as something pretty special.

With that awesome inevitability that only misfortune can muster, the game was dire with silly graphics of the most budget of budget game standards. The manic scream was okay though.



PETER WORLOCK

There may be peace on Earth this Christmas, bat in my household – as in many others – it'll be sheer hell for anything thet takes to the air.

First program into my Commodore 64 will be SubLogic's incomparable *Flight Simulator II*. Given the unpredictable climate of this grey, unpleasant land what could be better than a brisk spin over snow-covered landscapes, courtesy of FS-II's editor

How about a trip out of Seattle, a quick flight up to the Canadian border taking in Mount Rainier, and then down to sunnier climes in California – before ploughing the plane into the tarmac at Los Angeles International?

If thet pales, one can – and certainly will – give the Hun a run for their money in the 1918 mode Chocs away ginger, I've had enough of the Quality Street

If the aerial hazards (low-flying sleighs, etc) prove too much, it'll be *Elite* next. No problems here if it flies, blast the daylights out of it. If it doesn't fly, blast it anyway. Just the thing for Christmas afternoon when the powers of discrimination have failed in the face of the eighth pair of socks. A bit of drug-running, slave-trading and shooting up the local police station will perk you up no end.

In search of more cerebral pursuits I may power-up the Macintosh and challenge *Sargon III* to a game of chess I know everyone else thinks Psion's 3D graphics are the bees' knees but I find them distracting and I need all the concentration I can muster The burning question can I win without retracting every alternate move?

Answer no, I can't So, more than a little depressed, I'll probably turn to *Hitch-Hiker's Guide to the Galaxy* in search of a little light relief

In any case, it's only appropriate thet I should end the year as I began it. trying to reach Magrathea, best efforts of Bugblatter beasts, paranoid androids and the Sirius Cybernetics Corporation to the contrary

And finally, because one can only pursue the cerebral so far, I'll indulge in *Way of the Exploding Fist* I've tried for months to give that smug little nark on level 6 a taste of my foot and this might be the time

As for a dodo, I'd plump for Mosaic's *Adrian Mole* as the most disappointing Do yourself a favour – read the book instead.

JOHN COOK

Well, it's been a funny old time since last Christmas, hasn't it? It only seems like yesterday I was getting over too many *Morecombe and Wise* re-runs Still, if 1984 was the year of the Sports Simulation, then 1985 was the year of the Celebrity tie-in OK, I can understand *Steve Davis' Snooker*, but *Jack Charlton's Match Fishing*? Let's make 1986 the Year of Using Your Imagination, eh? '85 did have its high spots though *Highway Encounter* – a superbly original combination of puzzle and arcade action – likewise *Paradroid* (CBM – Hewson) Most impressive 'My God look at that' graphics award goes to Denton for *Shadowfire* and *Frankie* (CBM/Spectrum – Ocean) – with the 'Good grief is that sound coming from a 64' award going to Rob Hubbard. The 'Please can I have a Spectrum 128' goes to Mike Simpson for *Swords and Sorcery* (PSS – Spectrum) But what game will I still be playing far into 86 – boot *Revs* (Acornsoft) up on the BBC, and I'll see you at Brands Hatch

Xmas Computer Kit

Graham Taylor reminds you of everything you absolutely need (and will almost certainly forget) to make the most of your Christmas computing

Everybody doesn't love surprises, particularly unpleasant ones, on Christmas Day.

If you have bought your children a micro computer for Christmas (or if you are a child with little confidence in your parents' foresight) and have it hidden away on top of a cupboard, then you need the *Popular Computing Weekly* 'oh my God I thought that came with it' instant guide to survival when you open the box

Computers don't necessarily come with everything you need to make them work and sometimes the more basic instructions are ignored. Because we want you to have a really great time with your micro, we offer the following list of items and considerations

Plug

Yes, a plug Many computers don't come with one and many household don't have a ready supply of spares No shops are open on Christmas Day, thus many essential household electrical items sacrifice their own, leaving everyone kettleless or fireless So buy a 13 amp plug

Cassettes

Not the games kind; I assume those came with the machine or in any event you didn't forget to buy something to try on your machine (did you?). I can promise you the introductory tape that comes with the machine will not enthrall you. The kind of cassettes you need and may have forgotten are short (C16 usually) tapes specifically designed for saving programs on to

True, you can use those 120 conventional audio jobs, but a) it'll mean wiping off something, b) the quality isn't as good and c) it's much easier to forget exactly where you saved something on a long tape.

A trailing socket is a good idea, too

Discs

For those with a disc drive. As cassettes, except that they are all the same length – you will probably only need one to see you safely through Christmas and the New Year

Y Splitter

What on earth is a Y Splitter, you ask, and how come none of my friends have one? A Y Splitter is a device that lets you connect both your computer aerial lead and the normal TV aerial lead into the television at the same time Unless you have an Amstrad, chances are you will be using the family television for your computer at first. This will cause arguments enough, but at least with a Y Splitter you won't have to keep reaching over the back of the television to change leads (about £2 from electrical and TV shops).

Don't forget the discs!

Tuning In

The simple business of finding out where on the television frequencies the computer picture is supposed to be is fraught with pain, heartbreak and frustration. Here is a simple guide

a) Connect up all leads and switch computer on, check again that computer TV lead is in the correct sockets, both on the TV and the computer

b) Find a spare channel, ie, whatever system your TV uses – buttons or clever electronic digital stuff – find a 'spare' one that is not used for any of the usual TV channels

c) Adjust the frequency of this spare channel, this may mean button twiddling on the front or back of the TV

d) It is quite OK to do this pretty fast until you hear or see something on the TV, perhaps a flickery picture will form

e) Now go slowly. When the computer picture comes up adjust the frequency very carefully for the optimum result – usually looking at the state of some text on screen is the best guide With computers that put sound out through the TV, the sound level should now have dropped considerably

f) Hooray!

Odds and Ends

Screwdriver for plug A joystick (don't kid yourself, you need one), cassette player, batteries or mains lead with cassette player (with plug) Phone number of friend who has been through all this before. . .

Banner on Spectrum by C Gibson

This is a program that runs on any Spectrum with a ZX printer. On running, it will output a banner with any specified message, sideways, 32 characters high and a specified number wide.

```
1 [illegible] ON ZX PRINTER
5 [illegible] : INPUT "START ADDRESS OF CODE?";a
10 INPUT "Enter your message." a$
20 LET a1=INT((a+63)/256): LET a2=(a+63)-a1*256
30 INPUT "What width? (no. of lines per bit)";b
40 INPUT "Enter char. to make up display";c$:LET c=CODE c$
50 FOR q=a to a+62: READ x: POKE q,x: NEXT q
60 DATA 235,209,1,206 [illegible]
70 DATA [illegible]
80 DATA [illegible]
90 DATA [illegible]
100 FOR f=1 to LEN a$
110 LET [illegible]
120 POKE [illegible]
130 RANDOMIZE USR a
140 NEXT f
```

Combinations on Spectrum by G Counsell

Given any n elements stored in array F (which needs to be dimensioned if n > 10) this program prints out all possible combinations of the elements. Combination programs may not be all that new, but I've never seen one that does not need to be altered everytime the number of elements is changed.

(NB Glen has not taken up Country & Western programming — his contribution to Bytes & Pieces in Vol 4 No 49 was incorrectly attributed)

```
100 f(1)=1:f(2)=2:f(3)=3:f(4)=4
110 n=4
120 CLS:m=1
130 FOR p=n TO 3 STEP -1 m=m*p NEXT p
140 FOR q=0 TO m-1
150 FOR r=3 TO n-1
160 IF q/r-INT(q/r)<>0 OR q=0 GOSUB 190
170 m=r+1:GOSUB 260
180 NEXT r
190 m=3:GOSUB 260
200 FOR i=1 TO 2
210 LOCATE 1,1
220 FOR j=n TO 1 STEP -1 PRINT f(j);:NEXT j:PRINT
230 a=f(1) f(1)=f(2):f(2)=a
240 NEXT i,q
250 END
260 h=f(1)
270 FOR k=2 TO m f(k-1)=f(k) NEXT k
280 f(m)=h: RETURN
```

Screen Dump on Spectrum by N Hankin

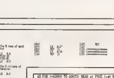
A while ago I bought the Brother M-1009 dot matrix printer. Once I had got it going I realised that the Spectrum *Copy* command did not work. So I set about writing my own routine to dump the screen on to the printer, and came up with this.

The program can be located anywhere in memory and is called by *Randomize Usr xxxx*, where xxxx is the address at which the routine was loaded into. Before calling the routine the computer must be told the baud rate for the "B" channel and this then linked to channel 3, as follows.

Format "B", baud rate
Open #3, "B"
Randomize Usr xxxx

The *Format* and *Open* need only be executed once until the computer is *Newed*.

The routine can be made to work on any printer by altering the control codes. The program below will poke the code into locations 60000 onwards. Once this has been done type *Save "COPY" Code 60000,74* before trying it. If it does not work check that the data has been correctly entered.



If the codes on your printer are different then the correct codes must be typed in. In the assembly listing the number in the appropriate *LD A,xx* statements must be changed. In the basic listing the number following the 62 must be changed in the appropriate lines.

```
10 FOR i=60000 TO 60073: READ a: POKE i,a: NEXT i
110 DATA 62,5
120 DATA 205,1,22
170 DATA 62,27
180 DATA 215
190 DATA 62,65
200 DATA 215
210 DATA 62,8
220 DATA 215
270 DATA 6,24
280 DATA 197
350 DATA 205,155,14
400 DATA 62,27
410 DATA 215
420 DATA 62,75
430 DATA 215
440 DATA 62,0
450 DATA 215
460 DATA 62,1
470 DATA 215
520 DATA 6,32
530 DATA 197
580 DATA 6,8
590 DATA 197
600 DATA 229
610 DATA 62,6
620 DATA 6,8
710 DATA 203,6
720 DATA 23
810 DATA 36
820 DATA 16,250
860 DATA 215
870 DATA 225
880 DATA 193
890 DATA 16,239
900 DATA 193
910 DATA 35
920 DATA 16,232
970 DATA 62,13
980 DATA 215
990 DATA 62,10
1000 DATA 215
1010 DATA 193
1020 DATA 16,205
1070 DATA 62,27
1080 DATA 215
1090 DATA 62,50
1100 DATA 215
1110 DATA 201
```



CHRISTMAS SCENE

by Andrew Clarke

This week, Part Two of the listing for the Snowman's Dance – a computerised festive greeting. Once typed in, Run the program. If all is well, then well done!

If, however, you get '*OUT OF DATA IN 12*', then one of three following things is wrong.

1) Too little sprite data. To rectify, find the sprite oo which the fault appears. If the ones before it in memory are OK, you can place the fault easily. Each block has 63 pieces of data

2) Figures in *For … Next* loops at the start are wrong. Check them against the listing

3) Commas missed out between data items. A similar remedy to '1' should be carried out.

Happy Christmas!

```
520 POKEV,X FORT=1TO100 NEXT IFJ<>0THEN516
522 GOTO504
600 POKE2043,245 POKE2044,240 POKE2045,244 POKE2046,249 POKE2047,250
602 POKEV+7,200 POKEV+9,200 POKEV+6,0 POKEV+8,0 POKEV+11,286
604 POKEV+12,200 POKEV+14,224 POKEV+13,100 POKEV+15,100
606 POKEV+42,14 POKEV+43,4 POKEV+45,1
608 GOSUB300 FORT=0TO20 POKEV+6,T POKEV+10,T+8 GOSUB620 GOSUB628 NEXT
610 FORT=22TO116STEP2 POKEV+6,T POKEV+8,T-20 POKEV+10,T+8 GOSUB620 GOSUB624
612 GOSUB620 NEXT
614 FORT=206TO200STEP-.5 POKEV+11,T NEXT GOSUB630
616 POKEV+21,223 RETURN
620 IFPEEK(2043)=245THENPOKE2043,246 GOSUB350 RETURN
622 POKE2043,245 POKEHF,8 RETURN
624 IFPEEK(2044)=245THENPOKE2044,247 RETURN
626 POKE2044,248 RETURN
628 FORK=1TO50 NEXT RETURN
630 POKEHF,0 FORD=0TO80 POKEV+39,D GOSUB360
632 NEXT GOSUB362 POKEV+39,1 RETURN
999 REM ***** SONG DATA
1000 DATA25,177,200,21,154,150,22,227,100,25,177,100,34,75,100,32,94,50
1002 DATA34,75,50,38,126,100,34,75,100,32,94,100,28,214,100 25,177,300
1004 DATA32,94,50,34,75,50,38,200,100,34,75,100,32,94,100,28,214,100
1006 DATA28,214,50 25,177,100,34,75,100,21,154,100,25,177,50,28,214,50
1008 DATA25,177,100,22,227,100,21,154,100,22,227,100,25,177,300,0,0,100
1010 DATA25,177,200,21,154,150,22,227,50,25,177,100,34,75,200,32,94,50
1012 DATA34,75,50,38,126,100,34,75,100,32,94,100,28,214,100,25,177,300
1014 DATA32,94,50,34,75,50,38,126,100,34,75,100,32,94,100,28,214,50
1016 DATA28,214,50 25,177,100,34,75,100,21,154,100,25,177,50,28,214,50
1018 DATA25,177,100,22,227,100,21,154,100,19,63,100,17,37,300,17,37,100
1020 DATA28,214,100,28,214,100,34,75,100,34,75,100,32,94,100,28,214,100
1022 DATA25,177,100,21,154,100,22,227,100,28,214,100,25,177,100,22,227,100
1024 DATA21,154,300,21,154,100,19,63,100,19,63,100,25,177,100,25,177,100
1026 DATA32,94,100,32,94,100,38,126,100,38,126,50,32,94,50,38,126,100,34,75,100
1028 DATA32,94,100,28,214,100,25,177,100,0,0,100,25,177,200,25,177,200
1030 DATA21,154,150,22,227,50,25,177,100,34,75,200,32,94,50,34,75,50
1032 DATA38,126,100,34,75,100,32,94,100,28,214,100,25,177,300,32,94,50
1034 DATA34,75,50,38,126,100,34,75,100,32,94,100 28,214,50,28,214,50,25,177,100
1036 DATA34,75,100,21,154,100,25,177,50,28,214,50,25,177,100,22,227,100
1038 DATA21,154,100,19,63,100,17,37,500,-1,-1,-1
1999 REM ***** SPRITE DATA
2000 REM ***** R SIDE UP/FRONT FACE
2001 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,160,0,2,102,0,2,170,0,2,154,0,0,165,0
2002 DATA128,252,0,162,250,0,42,190,160,10,190,160,10,175,136,10,154,128,10,170
2003 DATA128,2,170,0,2,168,0,130,0,0,160,10,0,0,10,120
2004 REM ***** NORMAL/FRONT FACE
2005 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,102,0,2,170,0,2,154,0,0,168,0
2006 DATA128,252,8,162,250,40,42,190,160,10,190,128,10,175,128,10,154,128,10
2007 DATA170,128,2,170,0,0,168,0,0,136,0,2,130,0,10,130,128
```

```
2008 REM ***** L SIDE UP/FRONT FACE
2009 DATA0,64,0,0,84,0,0,84,0,1,85,0,0,168,0,2,102,0,2,170,0,2,154,0,0,168,0,0
2010 DATA252,8,2,250,40,42,190,160,170,190,128,138,175,128,10,154,128,10,170
2011 DATA128,2,170,0,0,168,0,0,138,32,2,138,160,10,130,0
2012 REM ***** R SIDE UP/LEFT FACE
2013 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,106,0,2,170,0,1,170,32,2,160,160
2014 DATA0,254,128,3,232,0,42,170,0,14,170,0,15,170,0,11,170,0,6,170,0,10
2015 DATA170,0,2,168,0,138,32,0,168,160,0,34,160,0
2016 REM ***** NORMAL/LEFT FACE
2017 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,106,0,2,170,0,1,170,0,2,168,0,0
2018 DATA252,0,3,234,0,42,170,128,14,170,160,15,170,0,11,170,0,6,170,0,10
2019 DATA170,0,2,168,0,0,32,0,0,160,0,2,160,0
2020 REM ***** L SIDE UP/LEFT FACE
2021 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,106,0,2,170,0,33,170,0,42,168,0
2022 DATA10,188,0,3,170,0,15,170,128,14,170,160 15,170,0,11,170,0,6,170,0,10
2023 DATA170,0,2,168,0,0,42,0,0,162,128,2,170,128
2024 REM ***** R SIDE UP/BACK FACE
2025 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,170,0,2,170,0,2,170,0,0,168,0
2026 DATA128,252,0,162,170,0,42,170,160,10,170,168,10,170,136,10,170,128,10,170
2027 DATA128,2,170,0,2,168,0,138,8,0,168,10,0,8,10,128
2028 REM ***** NORMAL/BACK FACE
2029 DATA0,84,0,0,84,0,0,84,0,1,85 0,0,168,0,2,170,0,2,170,0,2,170,0,0,168,0
2030 DATA128,252,8,162,170,40,42,170,160,10,170,128,10,170,128,10,170,128,10
2031 DATA170,128,2,170,0,0,168,0,0,136,0,2,138,0,10,138,128
2032 REM ***** L SIDE UP/BACK FACE
2033 DATA0,84,0,0,84,0,0,54,0,1,85,0,0,168,0,2,170,0,2,170,0,2,170,0,0,168,0,0
2034 DATA252,8,2,170,40,42,170,160,170,170,128,138,170,128,10,170,128,10,170
2035 DATA128,2,170,0,0,168,0,0,138,32,2,138,160,10,130,0 REM *** R SIDE/RIGHT
2036 REM ***** R SIDE UP/RIGHT FACE
2037 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,166,0,2,170,0,34,169,0,42,170,0
2038 DATA10,252,0,2,175,0,10,170,160,10,171,0,10,170,0,10,170,0,10,169,0,10
2039 DATA170,0,2,168,0,0,138,32,0,162,160,0,168,128
2040 REM ***** NORMAL/RIGHT FACE
2041 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,166,0,2,170,0,2,169,0,0,170,0,0
2042 DATA252,0,2,175,160,10,171,128,42,171,0,170,170,0,10,170,0,10,169,0,10
2043 DATA170,0,2,168,0,0,128,0,0,160,0,0,168,0
2044 REM ***** L SIDE UP/RIGHT FACE
2045 DATA0,84,0,0,84,0,0,84,0,1,85,0,0,168,0,2,166,0,2,170,0,2,169,32,2,170,160
2046 DATA0,254,128,2,175,0,170,171,0,42,171,0,10,170,0,10,170,0,10,169,0,10
2047 DATA170 0,2,160,0,10,128,0,40,160,0,42,168,0
2048 REM ***** XMAS TREE
2049 DATA0,16,0,0,32,0,0,100,0,0,168,0,0,152,0,1,169,0,2,170,0,2,102,0,6,170,64
2050 DATA10,154,128,9,169,128,26,170,144,42,102,160,38,170,96,106,170,154,163
2051 DATA169,168,154,154,152,64,32,4,0,32,0,0,252,0,0,252,0
2052 REM ***** SNOWMAN WITHOUT HAT
2053 DATA0 0,0,0,0,0,0,0,0,0,0,0,0,168,0,2,102,0,2,170,0,2,154,0,0,168,0,128
2054 DATA252,0,162,250,40,42,190,160,10,190,128,10,175,128,10,154,128,10,170
2055 DATA128,2,170 0,0,168 0,0,136,0,2,138,0,10,138,128
2056 REM ***** SNOWMAN'S HAT
2057 DATA0 84,0,0,84,0,0,84,0,1,85,0,0,0,0,0,0,0,0,0,0
2058 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
2059 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
2060 REM ***** BOY (WALK)
2061 DATA0,128,0,2,160,0,2,168,0,1,80,0,1,112,0,1 240,0,0,192,0,2,160,0,2,96,0
2062 DATA2,96,0,2,85,0,2,160,0,2,160,0,2,168,0,1,80,0,1,80,0,1
2063 DATA84,0,5,5,16,64,1,64,16,1,0,4,0,0
2064 REM ***** BOY (NORM)
2065 DATA0,128,0,2,160,0,2,168,0,1,80,0,1,112,0,1,240,0,0,192,0,2,160,0,2,96,0
2066 DATA2,96,0,2,85,0,2,160,0,2,160,0,2,168,0,1,80,0.1,80,0,1
2067 DATA80,0,1,64,0,1,64,0,1,64,0,1,80,0
2068 REM ***** GIRL (WALK)
2069 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,84,0,1,92,0,1,124,0,5,48,0,0,224
2070 DATA0,0,224,0,0,252,0,0,160,0,0,160,0,2,168,0,10,170,0,1,80,0,21,20
2071 DATA0,4,5,0,0,4,0
2072 REM ***** GIRL (NORM)
2073 DATA0 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,84,0,1,92,0,1,124,0,5,48,0,0,224
2074 DATA0,0,224,0,0,252,0,0,168,0,0,160,0,2,168,0,10,170,0,1,80,0,0,64
2075 DATA0,0,64,0,0,80,0
2076 REM ***** SANTA + SLEIGH
2077 DATA0,0,0,0,0,0,0,0,0,0,0,2,0,0,20,0,0,80,0,0,144,0,0,224,0,0,160,0
2078 DATA2,144,85,69,80,0,0 83,0,5,92,192,7,252,63,255,15,12,3,12,3,255
2079 DATA240,0,0,0,0 0,0,0,0,0,0,0,0
2080 REM ***** DEER # 1
2081 DATA0,0,0,0,0,0,0,0,0,0,0,0,48,48,0,12,192,0,3,0,0,15,0,0,12,0,0,60
2082 DATA0,0,253,85,85,7,127,192,3,223,48,3,247,0,3,195,192,15,0,252,60
2083 DATA0,12,0,0,0,0,0,0,0,0,0,0,0,0
2084 REM ***** DEER # 2
2085 DATA0,0,0,0,0,0,0,0,0,0,0,12,12,0,3,48,0,0,192,0,3,192,0,3,0,0,15
2086 DATA0,0,61,85,85,7,127,192,3,223,192,3,247,0,3,207,0,0,252,0,0,192
2087 DATA0,0,240,0,0,0,0,0,0,0,0,0,0
2088 REM ***** END
```



CHRISTMAS CARD

by R Braverman

& J Tarrant

At last – the Christmas prezzies, the turkey, the mince pies ... and the electronic Christmas Card

Those too bloated to type through festive overconsumption can obtain tape copies from the authors. Write (enclosing a blank cassette plus an SAE and £1.00) to 217 Whitehorse Road, Croydon, CR0 2LH.

```
690 REM  ***** ROUTINE TO MOVE SNOWFLAKES *****
700 s=INT(RND(1)*(n+1)):x=p(s,0):y=p(s,1):ym=jump:xm=INT(RND(1)*5)-2
710 IF (x<(-0.5*ma)-2 OR x>(0.5*ma)+2) THEN bottom=base
                                        ELSE bottom=SQR(FNzy(x))
720 PLOT x,y,0:PRINT "*";
730 LET x=x+xm:LET y=y+ym
740 PLOT x,y,1:PRINT "*";
750 IF y<bottom THEN PLOT x,y,0:PRINT "*";:y=top
760 p(s,0)=x:p(s,1)=y
770 RETURN
780 :
790 REM  ***** DATA STATEMENTS HOLDING MUSIC *****
800 DATA 49,0,1,42,0,1,28,0,1,1,358,30,1,268,30,1,0,1,1,268,15,1,239,15,1,268,
         15,1,284,15,1,319,30,1,0,1,1,319,30,1,0,1,1,319,30,1,239,30,1,0,1,1,
         239,15,1,213,15,1,239, 15,1,268,15,1,284,30,1,358,30,1,0,1
810 DATA 1,358,30,1,213,30,1,0,1,1,213,15,1,201,15,1,213,15,1,239,15,1,268,30,
         1,319,30,1,358,15,1,0,1,1,358,15,1,319,30,1,239,30,1,284,30,1,268,60,
         17,358,30,10,358,15,2,402,15
820 DATA 17,268,30,10,426,15,1,0,1,2,478,15,17,268,30,10,536,15,2,478,15,49,
         236,30,42,426,15,1,0,1,28,1073,30,2,379,15,49,284,60,42,358,60,26,716,
         30,4,0,1,4,716,30,49,284,30,42,338,30,28,851,30
830 DATA 49,268,30,42,319,30,28,638,30,49,284,30,42,358,30,28,478,30,4,0,1,49,
         319,30,42,379,30,28,478,15,4,536,15,49,358,60,42,568,60,28,716,60,49,
         239,30,42,358,30,28,568,30,2,0,1,49,213,30,42,358,30,28,536,30,2,0,1
840 DATA 49,239,15,42,358,15,28,568,15,49,0,1,42,0,1,28,0,1,49,239,15,42,358,
         15,28,568,15,49,268,15,42,379,15,28,638,15,49,0,1,42,0,1,28,0,1,49,
         268,15,42,379,15,28,638,15,49,179,30,42,284,15,28,716,30,2,319,15
850 DATA 4,0,1,49,358,30,42,358,30,28,716,15,4,804,15,49,358,15,42,358,15,28,
         851,15,49,0,1,42,0,1,28,0,1,49,358,15,42,358,15,28,851,15,49,319,30,
         42,402,30,28,804,15,4,851,15,49,239,30,42,319,15,28,956,30,2,358,15
860 DATA 2,0,1,49,284,30,42,358,30,28,716,30,49,268,60,42,358,60,28,536,60
870 DATA 2,358,30,2,268,30,2,0,1,2,268,15,2,239,15,34,268,15,20,536,30,2,284,
         15,34,319,30,20,402,30,34,0,1,20,0,1,34,319,30,20,402,15,4,358,15,
         2,0,1,34,319,30,20,402,15,4,426,15,34,239,30,20,478,30,34,0,1,20,0,1
880 DATA 34,239,15,20,478,30,2,213,15,34,239,15,20,379,30,2,268,15,34,284,30,
         20,358,30,4,0,1,34,358,30,20,358,15,4,319,15,34,358,30,20,358,15,
         4,402,15,34,213,30,20,426,15,4,379,15,2,0,1,34,213,15,20,338,30
890 DATA 2,201,15,34,213,15,20,426,30,2,239,15,34,268,30,20,319,45,2,319,
         30,4,358,15,34,358,30,20,402,15,4,426,15,34,319,30,20,402,15,4,426,15,
         34,239,30,20,478,30,34,284,30,20,358,30,34,268,60,20,536,60
900 DATA 49,358,30,42,478,30,28,402,30,49,268,30,42,358,15,28,426,15,34,402,15,
         20,478,15,1,0,1,49,268,30,42,426,15,28,536,15,34,402,15,20,478,15,1,0,
         1,49,268,30,42,358,15,28,426,15,34,638,15,20,402,15
910 DATA 49,284,60,42,478,60,28,358,15,4,319,15,4,358,15,4,402,15,17,0,1,10,0,
         1,49,284,30,42,478,30,28,426,15,4,478,15,49,268,30,42,358,30,28,426,
         30,49,284,30,42,478,15,28,478,30,2,451,15,49,319,30,42,379,30
920 DATA 28,478,15,4,536,15,49,358,60,42,478,30,28,568,30,34,536,30,20,638,30
930 DATA 49,239,30,42,358,30,28,568,30,2,0,1,49,213,30,42,358,30,28,536,30,49,
         239,15,42,358,15,28,568,15,49,0,1,42,0,1,28,0,1,49,239,15,42,358,15,
         28,568,15,49,268,15,42,402,15,28,638,15,49,0,1,42,0,1,28,0,1
940 DATA 49,268,15,42,402,15,28,638,15,49,179,30,42,284,15,28,716,30,2,319,15,
         4,0,1,49,358,30,42,358,30,28,716,15,4,804,15,1,0,1,49,358,15,42,536,
         15,28,851,15,49,0,1,42,0,1,28,0,1,49,358,15,42,536,15,28,851,15
950 DATA 49,319,30,42,402,30,28,804,30,49,239,30,42,319,30,28,956,30,49,284,30,
         42,358,30,28,716,30,2,0,1,49,268,90,42,358,90,28,1073,90
960 DATA 128,0,1,0,0,0,0,0,0,0,0,0
970 DATA end
980 END
```



WILBUR

by T A Bratley

Sing – and now the end is near and though I face the final listing (cue music voice over) yes friends, the last few bytes of code for our machine code arcade game, *Wilbur*

As usual, type in the loader, run it and enter the data from the dump. Once you have the 'Data OK' message, save the data to tape using Save "" code 53886 4914

You should now have five blocks of code (one for each week) saved on tape – you might find it easier to load them all into memory, and save all the code as a single block. Use *Save "Wilbur" Code 38400,20400* Once you have the code in memory, the game is started by *Randomize Usr 38400*

If all that typing seems a bit much, tape copies of the game can be obtained from T A Bratley, at a cost of £2.00 Write to him at 81 Beverley Cres, Grimsby, South Humberside DN32 9TJ

```
1000 REM    DECIMAL LOADER
1010 POKE 23609,50
1020 LET T=0: FOR N=53886 TO 58799
1030 INPUT J: PRINT N,J: POKE N,J: LET T=T+J: NEXT N
1040 IF T<>387624 THEN PRINT "DATA ERROR:CHECK LISTING"
1050 IF T=387624 THEN PRINT "DATA OK"
```

[illegible]



THE HILL

by A P Morris

This week, the second and final part of *The Hill* – the game in which you must skilfully adjust the trajectory of a stale mince pie over a green Christmas pudding. Or something like that, anyway.

Designed for two players, this one is a must for any sentient QL owner – best played after the Queen's speech.

```
1070  lo=PEEK(mpos+1) DIV (4^(3-(rx DIV 2)
      MOD 4))
1080  colv=lo && 3:colv=colv+(hi &&2)*2
1090  colv=colv+(hi && 1)*4
1100 END DEFine hit
1110 REMark ------------------------
1120 DEFine PROCedure flare(kl)
1130  INK#5,kl:FILL#5,1
1140  ARC_R#5 TO 0,20,RAD(100) TO 0,-20,
      RAD(100)
1150  FILL#5,0:INK#5,7
1160 END DEFine
1170 REMark ------------------------
1180 DEFine PROCedure house
1190  FOR x=15,315
1200   FILL#5,1:INK#5,6
1210   LINE#5,x,10:LINE_R#5 TO 0,4 TO 4,2
       TO 4,-2 TO 0,-4 TO -8,0
1220   INK#5,6:LINE_R#5,-1,3: LINE_R#5 TO
       6,4 TO 6,-4:FILL#5,0
1230  END FOR x
1240 END DEFine house
1250 REMark ------------------------
1260 DEFine PROCedure blow
1270  INK#5,5
1280  wind=RND(0 TO 50)/10
1290  direction=RND(184 TO 185)
1300  wind$=FILL$((CHR$(direction)),INT
      (wind)+1)&' Wind '&FILL$((CHR$
      (direction)),
INT(wind)+1)
1310  wind_title
1320  IF direction=185 THEN wind=-wind
1330  INK#5,7
1340 END DEFine blow
1350 REMark ------------------------
1360 DEFine PROCedure wind_title
1370  AT#5,0,(18-(LEN(wind$)/2))
1380  INK#5,5
1390  PRINT#5;wind$
1400  INK#5,7
1410 END DEFine
1420 REMark ------------------------
1430 DEFine PROCedure ground
1440  BLOCK#5,437,10,0,168,4
1450 END DEFine ground
1460 REMark ------------------------
1470 DEFine PROCedure hill
1480  REPeat hill_ok
1490   CLS#5:ground
1500   INK#5,4:FILL#5,1
1510   hiy=RND(40 TO 100)
1520   hix=RND(110 TO 190)
1530   pm1=RND(0 TO 1):pm2=RND(0 TO 1)
1540   u_ang=RND(20 TO hiy)
1550   d_ang=RND(20 TO hiy)
1560   IF pm1=0 THEN u_ang=-u_ang:END IF
1570   IF pm2=0 THEN d_ang=-d_ang:END IF
1580   ARC#5,40,10 TO hix,hiy,RAD(u_ang)
       TO 290,10,RAD(d_ang)
1590   LINE#5,290,10 TO 40,10
1600   FILL#5,0:INK#5,7
1610   x=405-(pl*270):y=5:hit x,y
1620   IF colv=4 THEN house:blow:RETurn
1630  END REPeat hill_ok
1640 END DEFine hill
1650 REMark ------------------------
1660 DEFine PROCedure names
1670  CLS#4:AT#4,0,3
1680  PRINT#4;"Please enter the Players
      NAMES?"
1690  FOR pl=1 TO 2
1700   BEEP 1000,30:AT#4,2,2:CLS#4,4
1710   PRINT#4;"Player #";pl,:INPUT#4,
       player$(pl)
1720   IF LEN(player$(pl))>8 OR player$
       (pl)="" THEN AT#4,2,2:CLS#4,4:GO
       TO 1700
1730   caps player$(pl)
1740  END FOR pl
1750  CLS#4
1760  AT#4,0,7:PRINT#4;player$(1)
1770  AT#4,0,29-LEN(player$(2)):PRINT#4;
      player$(2)
1780  INK#4,0:AT#4,1,1:PRINT#4;"Hits":
      AT#4,1,31:PRINT#4;"Hits"
1790  AT#4,1,16:PRINT#4,"ROUND":INK#4,1
1800 END DEFine names
1810 REMark ------------------------
1820 DEFine PROCedure caps(name$)
1830  IF CODE(name$(1))>96 AND CODE(name$
      (1))<127 THEN name$(1)=CHR$(CODE
      (name$(
1))-32)
1840 END DEFine caps
1850 REMark ------------------------
1860 DEFine PROCedure set_window
1870  OPEN#6,scr_512x256a0x0
1880   BORDER#6,17,7
1890  OPEN #4,con_448x56a32x200:PAPER#4,5
1900   BORDER #4,3,100:INK#4,1:CLS#4
1910  OPEN #5,scr_448x184a32x16:PAPER#5,1
1920   BORDER#5,3,200:INK#5,7:CLS#5
1930   SCALE#5,184,0,0
1940 END DEFine set_window
1950 REMark hard copy prog--------
1960 DEFine PROCedure plist(a,b)
1970 BAUD 600
1980 OPEN #8,ser1c
1990 LIST #8,a TO b
2000 CLOSE #8
2010 END DEFine plist
```

Christmas competition

This week we have news of a special Christmas competition for BBC owners so if you fancy finding out why games players all over the country have been practising their flying kicks on the cat read on.

Regular readers of the column will be aware that Melbourne House, after a long period of concentrating on adventure/strategy games, had a flurry of activity in the last part of this year releasing some very high quality games: *Sir Lancelot* was the first, notable for the accomplishment of the programming but rather old had in format, but soon followed by *The Way Of The Exploding Fist, Starion, Fighting Warrior* and *Gyroscope* and we still have *Asterix, 3D Rock and Wrestle* and some 'secret projects' to look forward to.

Lack of music

It reads like a catalogue of some of the best games of 1985 and I personally rate *Fist* as game of the year. Despite the mass of Kung Fu games that are appearing, this one stands out for its balance of technical accomplishment and addictiveness. The computer player is mean and doesn't make stupid mistakes while the two-player game adds enormously to the fun.

The company's experience has meant that all conversions of the game are worth buying, although there was some criticism of the Amstrad version in the column a week or two ago for the lack of music or changing backgrounds. MH have assured me that it was solely the clamour of public demand for the game that caused such a quick release and I don't think it really affects the quality of the game itself.

The good news for BBC/Electron owners, therefore, is that Melbourne House had not ignored them in the conversion and has just brought out *Fist* and an excellent version of the *Marble Madness* clone *Gyroscope*. To commemorate this the company has kindly given *Popular* ten copies of the *Fist* conversion to give away. All we want you to do is produce a limerick that ends in the line 'The Way Of The Exploding Fist'. The ones we judge to be the funniest, or best describes the qualities of the game, will receive a copy.

Limited skill

When you write in, please address your entry to *Popular Computing Weekly* at the normal address, mark the envelope 'Exploding Fist Competition' and please put your answer, with your address, on a separate sheet from any other correspondence. To allow for the Christmas post we will leave the judging until the end of January.

Now then, to carry on the theme of this week's column, the tips we are printing are all to do with Melbourne House games, although unfortunately we don't have room for some pages of excellent advice on *Fist* sent in by David Cowler and Andrew Slator of Hemel Hempstead.

Fighting Warrior features some of the most marvellous animated monsters ever seen in a computer game, but although it was looked on by many reviewers as a follow up to *Fist* it really isn't on the same level. The skill involved is too limited, as these tips from Darryl Lee, of Stoke, will show.

"When in combat the only choices available to you are duck, jump, hit high, hit low or hit middle. Ducking and jumping is sometimes worthwhile if the monster seems stuck on a particular attack, for example those with lion heads seem to like hitting high, but they can give your opponent time to get in several hits.

Usually, however, it simply pays to use middle hits – these strike whether the monster is just standing, jumping or ducking and you should find that it does enough of the latter for you to build up a considerable lead.

"Dodging the arrows isn't worth the trouble since the monster can usually land a couple of hits while you are doing so.

"Once you have mastered fighting to a degree, all you have to do is get the hang of the vases. Hitting these with low strikes can have good or bad effects, the good ones being 2, 3, 5, 6, 7 in a sequence of eight.

Fighting Warrior from Melbourne House

Energy points

"When you get to a vase that is higher than the rest, if you smash it the door to the temple which contains the princess will appear. When inside, every hit you make on the monster will cost you an energy point but the monster has the same stamina as the last one you met outside so you should try to weaken, but not kill, this one before you go in. The princess can be freed by a high cut.

"I enjoyed the game but it would have been better if the fighting sequences were more thought out so that they gave more options and weren't so dull."

Let's finish this week with some more solutions for the brilliant *Starion*, thanks to G D Menzies and Sean Lambert. Incidentally 'G' would like to see some 'infinite lives' pokes for this game. Does anyone fancy the challenge? (Personally I would like to see a cross between the playable and slick *Starion* and the complex universe of *Elite*, but we can all dream.)

Sector 5: Nato 1949, Gillette 1895, Odyssey 2001, Asp 35 BC, Alps 218 BC, Radium 1898, Petrol 1885, Eric 0962, Hawaii 1959 Password Orphanage.

Sector 6: Table 1889, Eclipse 1999, Ribbons 1871, Nero 0064, Alaska 1867, Uranium 1945, D 1944, Electron 1897, Vesuvius 0079 Password. Adventure

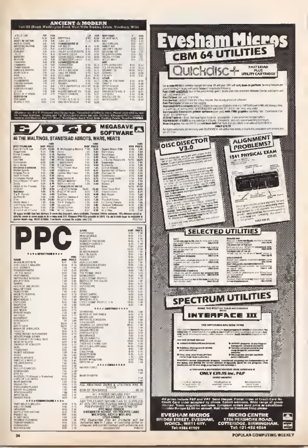
Sector 7: Cannon 1812, Nobel 1867, Tea 1773, Insulin 1922, Edward 1042, Exhibit 1851, Calcutta 1756, China 1897, Rosetta 163 BC Password: Eccentric

Sector 8: Manager 0004, Iceberg 1912, Crash 1929, Eagle 1969, Bahamas 1492, Orb 1953, Arrow 1066, Triangle 543 BC, Needle 1796 Password. Combinate

Sector 9: Apple 1882, Nelson 1805, Ides 0044 BC, Archduke 1814, Hydrogen 1900, Morse 1837, Ink 1456, Boom 1969, Pole 1911 Password. Amphibian

I wish we could give a prize for anyone who can explain some of these clues for me – Ribbons, Manager and Triangle, for example. Anyway that's all for now, and Happy Christmas.

Tony Kendle


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Tony Bridge's Adventure Corner

A good year

Well, that's another year over with It's been a good year, and I don't agree completely with those who think that 1984 was better for us adventurers Exactly a year ago, The Corner was looking back at 12 months of innovation from companies like Beyond with the first part of their *Lords of Midnight* trilogy and smaller triumph, from Delta 4 and Incentive's *Ket Trilogy* – yes it was a very good year

But look what has happened in 1985: there are more American adventures coming on-stream (and they've always, in my opinion, been a nation of adventurers unlike the arcade-loving British) and I think that we'll see more in the future Authors at home have also been hard at work and seem to have taken heart at the wider acceptance that adventures received in 1984 The *Quill* has been largely responsible for this, and while there have been some pretty dire products of this utility, there have been some good ones too

The renaissance of the British micro at a time when boredom was setting in and hard and software companies were getting a little too serious about the whole thing, was embodied in the release of the 'old-fashioned' (but technically very sound) Amstrad range. This has ensured that the coming year appears to have a good chance of being the most successful for a long while

Not only are more people getting the chance to play and enthuse over adventures, but more people too are writing adventures for the delight of others *The Quill*, of course, has helped in this, but there are now other adventure-writing utilities, notable *GAC* from Incentive and *Genesis* from CRL – both of them on the Amstrad – and thus can only be good for adventure-players in general.

Much as I enjoy looking forward to block-buster adventures, I have all too often been disappointed at the final result It's an unfortunate fact that most software houses have lost sight of the original premise of computer games of any sort to have fun and pass a little time that may otherwise be filled with yet another episode of *Dynasty* or *Crossroads* Which is why I'm particularly pleased to see software houses like Delta 4 (now with Silversoft) and St Brides – those, in other words, with a sense of humour and proportion – flourishing despite the heavy costs of keeping up with the majors

Commitment

Unlike arcade games, adventures can be perfectly successful, though they may not exhibit the very latest techniques and even the dimmest non-programmer – like me – can have a stab at creating a best-selling adventure

So for me, the most interesting adventures of the past year have been those sent in by readers of this column, showing as they do the enthusiasm and commitment that marked the first year or so of the Sinclair era Nobody really expects to make megabucks from these largely *Quill* programs, but they *do* expect other adventurers to play and enjoy the programs, and while I haven't been able to mention every adventure sent to me, I hope that enough interest has been shown by other readers to encourage the authors Most of the programs are very reasonably priced and well worth playing

Epic proportions

Going from the front-room adventures to the block-busters, you will know by now that *Lord of the Rings* has at last been released, at least on the Spectrum and eventually on the BBC, Amstrad and Commodore machines Ever since *The Hobbit* we have all (and I mean all!) been waiting for this one above all others At the time of writing I've had the program for an evening, and it's obviously going to need many many evenings before any real progress is made – if only because response time is about two decades for anything more demanding than HELP.

Lords of Midnight from Beyond

The package is of epic proportions, as befits the subject, and includes a 'bare-bones' version of the adventure to ease you into the complexities of the main program. Coming as it does with the book of the first part and two cassettes along with a hefty instruction book, it should be top of your present list for any highly-regarded adventuring friend (who will have to be very special, considering the price of the thing) In the months to come you can rest assured that you will see much mention of it in The Corner

Among the other programs to reach the shops is, after two years of waiting, *Swords and Sorcery* from PPS Although a full review will have to wait awhile, I have to tell you that after that two-year wait, the program seems about four years out of date A great pity, for this was the one that was going to be the salvation of all the D&D'ers amongst us who were looking for the ultimate solo dungeon

Having said that, it's not a total waste of time you'll find lots of monsters to kill, a complicated hit system, a few puzzles of the 'to which room should I take this object in order to have what effect' genre, a nicely-animated 3D maze, a bit of inter-reaction with the monsters and so on While one or two other players have become rather addicted to it, which is always a good sign, for me the whole thing was a bit of a yawn. I shall persevere though and bring you a fuller review in the new year

The saddest event for us adventurers was the demise of *MicroAdventurer*, but this has had the happier result of spawning a number of Adventure Clubs, each with their own magazine, help line and so on, each of them very active and well worth subscribing to More about these in the new year too

Have a happy adventuring Christmas, let's hope that Ronnie and Micky will allow us another year of batting with the Trolls, outwitting the Babel Fish and solving Mrs Brown's suicide

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Wanted

SWAP fully paid-up course with New York Institute of Photography Unused. Also complete range of darkroom equipment with enlarger and lens for NLQ printer and modem for CBM 64

520 ST PENPALS required! I am an ST user who would like to hear from others. Write to Paul Taylor 87 Shelley Street, Northampton NN2 7HZ or Phone (0604) 717661

WANTED SINCLAR micro Prolog in exchange for Hisoft Spectrum Pascal (with 51 col display) Tel Bryan 01 [illegible] (Greenwich) or write to S Ford 8 Marston Ferry Road Summertown Oxford

WANTED AN ATARI disc drive Preferably with some kind of copy program (archiver) Pay up to £100 Tel 65848 Penzance Cornwall

SWAP NIKON FM with 35 mm lens for 1541 disc drive with games Also sell Spectrum 48K with 22 games £75 Tel 0908 77829 after 7.30 pm and weekend

CAN YOU program in Z80 m/c? We need your help in a control type project (East London) Tel 01-405 0978 (Pat) Now!

WANTED SPECTRUM 48K with all leads manuals etc Will pay £50 series 2 or 3 Will pay £70 if upgraded Saga keyboard or DK Tronics keyboard Tel Oxford 0865 244148

SWAP AMSTRAD CPC 464 green screen perfect condition for recent version Sinclair QL, or sell for £115 Also Amstrad software for sale, cheap Tel Ware (Herts) [illegible]

WANTED SPECTRUM micro Prolog and manual Also Pascal (SP Dos version) Tel 04730889084

Tandys for Sale

BBC A upgraded 32K 1.20 S. VGC plus joysticks and software dozens magazines (Your Computer and Beebug 12 issues) Tel [illegible] 298

Quiz Answers

How Good is Your Buff?

1 a 1 b 2 c 0, 2. a 1 b 3 c 0 3 a 2 b 0 c 3 (True buffs aren't interested in adventures) 4. a 3 b 1 c 0 5 a 1 b 3 c 1 6 a 1 b 2 (That man hasn't been Knighted) c 1 7 a 0 b ½ c 2, 8 a 0 b 0 c 1 9 a 0 b 1 c 0 10 a 1 b 1 c 0 11 a 1 b 1 c 1 (not that adding interfaces still help), 12 a ½ (idealistic) b 1 (sceptical) c 0 (cynical), 13 a 1 b Score ½ if you don't own a BBC (smug) score 1 if you do (sympathy point) c 2, 14. a 1 b 2 c 1 15 a Score 0 if you're a BBC owner (too concerned with image to be a real buff) ½ if not b ½ c 2 16 a 0 b 1 c 1 17 a 6 b 1 c ½ (correct but true buffs go without food) 18 a 0 b 0 c 0 19 a ½ b 3 (depends who publishes them) c 5 20 a 0 b 1 c 3 21 a 0 b 0 c 3 22 a 0 b 0 (he's Austrian) c 1 23 a ½ b 2 c 2, 24 a ½ b 3 c 1 (can't verify this down to the last letter but score for reading the magazine reports) 25 a 0 b 0 c 3, 26 a 0 b 0 c 1 27 a 0 b 0 c 1 28 a 1 b 0 c 0 29 a 2 b 0 c 1 (it could so easily have been) 30 a 0 b 1 c 0, 31 a 2 b 0 c 0 32 a 0 b 2 c 0 33 a 0 b 1 c 0 d 0 34. a 0 b 1 c 0 35 a 0 b 0 c 1 36 a 2 b 3 c 1 (score 3 if you are a software house) 37 a 3 b 1 (not easy) c 1 (not for the true buff it isn't) 38 a 0 b 2 a 0 (and sceptical) 39 a ½ (you may know something nobody else does) b 0 c 2 40 a 1 b 1 c 3 41 a 2 b Score 2 if you're still using yours exclusively, otherwise 0 c 2, 42 a 0 b 0 c minus 3 43 a 0 b 1 c 2 44. a 0 b 2 c 3 45 a 2 b 1 c 1 46 a 2 b 1 c 1 47 a 2 b 0 a 0, 48 a 0 b 1 c 2 (bet you didn't know this did you? Neither did we) 49 a 0 b 0 c 1 50 a 0 b 0 c 1 51 a 0 b 0 c 1 52 a 3 b 1 c 0 53 a 3 b 0 c 1 54. a 0 b 0 c ½ (good guess) 55 a 0 b 0 c 1 56 a 2 b 0 c, 57 a 0 b ½ c 1 (try it and see) 58 a 2 b minus 1 c 0 59 a 0 b 3 c 0 60 a 0 b 0 c 2 61 a 0 b minus 2 (where's your festive spirit?) c 3 62 a 3 b 0 c 0 63. a 0 b 0 c 1 64. a 1 b 1 c 2 65 a 1 b 1 c 2 66 a 1 b 1 c ½ (opinions vary) 67 a 0 b ½ c ½ 68 a 1 b 1 c 2 69 a 1 b 1 c 2 70 a 0 b 2 c 1

0-29 points? *Ignoramus*

Computers aren't everything. You shouldn't be all that worried about missing the boat in the blazing neon bush of technology. Do you find bank cash dispensers a bit daunting?

29-60 points? *Amateur*

You know you ought to understand all about the market in the frenzied football match of computer choice but you always buy the ones and notice just two minutes after each off. You have typed in 300 programs from magazines and hours are of brain work. Chez with cash dispensers too and video recorders a bit hard to understand.

60-99 points? *User*

Although you stare blankly at m/c you have written programs in Basic, a) to tell you what day it is, b) to play Battleships and c) to calculate (in tens) your average weekly consumption. At home with cash dispensers and videos your problem is the memory minutes on a calculator.

69-129 points? *Expert*

Able to translate op-code and Hebrew at a glance. You have already turned down 12 job offers with IBM, and disassemble the chips in your microwave for amusement. You have no problem with any electrical [illegible] except toasters.

The Rogue Program

David and Cindy's adventures in the Rogue Program will continue on January 9th

New Releases



HIGH JUMP

Whilst most micros have dozens of *Decathlon* style games to choose from, the BBC has hardly any. This is probably because the memory doesn't allow you to have many different events without loading them in individually However, the BBC is capable of just the sort of detailed graphics that suit the animation in such games and on disc you can have all the events you want

Proof of all this comes from Alligata's excellent *Olympic Decathlon* program, which, though not up to the best Commodore offerings, is a most entertaining game There are a number of events to be completed as part of the decathlon, running, 100m, 400m, 1500m, (this last causing the fingers no end of damage) long jump, shot putt, javelin, hurdles, discus, pole vault and high jump

Controls have been reduced to the bare essentials left and right feet and a single key for either jump or throw depending on the event You can choose either to practise events singly (where you must, in each case, beat the qualifying time) or attempt the complete decathlon of events with your score being totted up as you complete each element.

The graphics are smooth, colourful and quite large and the animation is very effective I found it a lot of fun and it's comparatively cheap.

Program *Olympic Decathlon*
Price *£9 95*
Micro *BBC*
Supplier *Alligata Software*
1 Orange Street
Sheffield
S1 4DW

IMPRESSIVE

The Neverending Story, Ocean's game of the fantasy film has at last turned up, on of all things, the Amstrad – usually third in the queue for conversions after the Spectrum and Commodore. It may prove to have been a very smart move though because the graphics illustrating this adventure are simply excellent and with the Amstrad's monitor picture they look at their best.

Not only are the graphics beautifully designed and full of detail, but the display of the graphics is itself unusual and impressive. It uses an effect rather like those TV pictures where a smaller picture is superimposed on the main screen to show another area of action. In this case a main area illustration, eg, the forest, will be illustrated over several locations but smaller insert pictures are superimposed as you move around.

It's a vast adventure loading three parts with over 100K worth of code, what it lacks, though, is complex text analysis. Ocean have decided that size of adventure and graphics are a more important trade off This means that you must restrict commands on two words and you get such bizarre statements as *Go North – there is no verb in that sentence* Such things make the Grand Elf turn blue at the edges

Pick of the week

A TOUCH OF

Ultimate have, let's face it released some pretty duff games recently Beginning with the clever but flawed (ie it was totally boring) *Nightshade*, it issued a number of Commodore games with few redeeming points It was with much trepidation then that I greeted *Gunfright*, the latest Ultimate game and the first since *Nightshade* for the Spectrum.

Bad points first The graphics routines from *Nightshade* have been imported lock stock and barrel (there are a lot of guns in the game) You get the same sort of detailed house fronts which disappear when you enter them – clever and pretty, but a little confusing I always found

However, the oh my God, *Nightshade* again' feeling soon passes *Gunfright* is a much more entertaining game and though not a classic is heavily recommended Not only does it work as a game, but there are some wonderful touches of humous The best joke is the fact that your trusty steed is no white stallion, but a rather dopey looking pantomime horse worn around your waist like a rubber ring.

The plot has you seeking out criminals and blasting them into oblivion for a fat reward. Some criminals can be shot with relative ease (once you've found them), others take you on in a fast draw duel to the death At this point the screen changes to a straight face-on view of the baddie and if your reflexes are poor you end up with a TV screen full of gunshots.

There are trading elements to the game as well, you earn rewards for baddies captured, but there are expenses

This Week

Program	Type	Micro	Price	Supplier
Sweevo's World	Arc	Amstrad	£7.95	Gargoyle Games
TLL	Arc	Amstrad	£7.95	Vortex
The Wargame	S	Amstrad	£7.95	Reelax
Basic Extention	Ut	Amstrad	£2 99	Paul Burke
Fighter Pilot	S	Atari	£12.95	Digital Integration
Olympic Decathlon	S	BBC	£9 95	Alligata
Souls of Darkon	Ad	Commodore 64	£8 95	Task Set
Bounder	Arc	Commodore 64	£9.95	Gremlin Graphics
Enigma Force	Arc	Commodore 64	£9 95	Beyond
Gertie Goose	Arc	Commodore 64	£7.95	Reelax
One Site too Beep	Arc	Commodore 64	£7 95	Reelax
Pod	Arc	Commodore 64	£7 95	Reelax
Superman	Arc	Commodore 64	£9 95	Beyond
The Trading Game	S	Commodore 64	£8 95	Reelax
Airwolf	Arc	Enterprise	£7.95	Enterprise
Wizard's Lair	Arc	Enterprise	£7.95	Enterprise
Fourth	Ed	Enterprise	£7 95	Enterprise
Tiny Touch n Go	Ed	Enterprise	£7.95	Enterprise
The market	S	Enterprise	£7.95	Enterprise
Night Fight	Arc	QL	£14 95	Realtime
Mindshadow	Ad	Spectrum	£7.95	Activision
Gunfight	Arc	Spectrum	£9 95	Ultimate
Quake Minus 1	Arc	Spectrum	£9.95	Beyond
West Bank	Arc	Spectrum	£7 99	Gremlin Graphics
The Wargame	S	Spectrum	£7.95	Reelax
Their Finest House	S	Spectrum	£10 95	Century

Key Ad – adventure S – strategy simulation Ed – education
Arc – arcade Ut – Utility



HUMOUR

like bullets to be considered and if you want your salary you'll have to collect it . .

Hunting out the baddies w the real point of the game, though, and in this, a collection of roving townspeople both help and hinder you The help derives from the fact that some of them just feverishly walk up and down pointing out the direction of the next criminal, the hindrance, that they frequently get in your way and, if accidentally shot, cause you to lose money.

It's fun, and the scoring system should mean that, unlike *Nightshade* it is always possible to do better next time and kill a few more villains The first Ultimate game in a while that I shall be sneaking home from the office in my saddlebag

Program *Gunfright*
Price *£8 95*
Micro *Commodore 64*
Supplier *Ultimate*
The Green
Ashby de la Zouch
Leicestershire
LE6 5JU

The plot of the film is kept largely intact since it has the requisite ingredients of magic, goodies and baddies, evil, niceness and fairly niceness There are lots of people with funny names who crop up here and there – you play Atreyu who has to find the Saviour (of Fantasia) His name is Bastian and has only a few people and Auryn, a gold and silver talisman to help him in his search I'd have though a good map and compass would have been more use

I think that from what I've seen of it many purist adventurers will find *The Neverending Story* glossy but unsophisticated but then they don't make software companies lots and lots of money The game certainly looks good and is well presented

Program *The Neverending Story*
Price *£9 95*
Micro *Commodore 64*
Supplies *Ocean Software*
6 Central Street
Manchester
M2 5NS

PREHISTORIC

Yabba Dabba Doo is an arcade game from Quicksilva based around the Flintstones, cartoon heroes from the long distant past Usually this kind of licensing deal is a disaster, but in the case of *Yabba Dabba Doo* it's surprisingly effective

The game features a complicated plot which involves Fred Flintstone clearing rubble and building a home for his beloved Wilma Various prehistoric creatures get in the way, particularly pterodactyls and turtles Once Fred gets as far as placing a roof on his house, he has to hire a dinosaur, earning the money for this by working in a quarry (ain't life hard?)

The game has some of the most charming graphics I've seen in a long while, the original cartoon characters seem to have been copied pixel for pixel in large, smoothly animated sprites

I'd say that this is a particularly good game for young lads if it wasn t for the fact that they probably haven't a clue who or what the Flintstones were, but perhaps that doesn't matter In any event it's a thoroughly worthwhile program.

Program *Yabba Dabba Doo*
Price *£7 95*
Micro *Commodore 64*
Supplier *Quicksilva*
Liberty House
222 Regent Street
London W1R 7DB

REDESIGNED

Central Solutions has issued a number of tapes containing two programs a piece, one on each side Two games for £3 99 seems like a good buy, but for the most part you don't get what you don't pay for

One of the tapes cootains an arcade game called *Anteroo* and the other side a graphically illustrated adventure called *Prelude* *Anteroo* is awful, sub *Jet Set Willy* caverns and badly programmed so that movement is jerky

Better is *Prelude*, a standard adventure with some simple but instantly drawn illustrations. It's all about destroying key Nazi installations before D Day commences and seems fast with a nicely redesigned character set

Overall? Personally *Prelude* on its own for £1 99 would have been fine, £3 9 with the addition of *Antteroo* makes it less good value

Program *Antteroo/Prelude*
Price *£3 99*
Micro *Spectrum*
Supplier *Central Solutions*
500 Chesham
House
150 Regent Street
London W1R 5FA

This Week

Activision, 15 Harley House, Marylebone Road London NW1 01-486 7588 **Alligata,** Orange Street Sheffield S1 4DW, 0742 755796 **Beyond,** Lector Court, 153 Farringdon Road London EC1R 3AD 01-837 2899 **Century,** 12-13 Greek Street London W1V 5LE **Digital Integration,** Watchmoor Trade Centre Watchmoor Road Camberley Surrey GU15 3AJ **Enterprise,** 31-37 Hoxton Street London N1 6NJ 01 739 4282 **Gargoyle Games,** 74 King Street, Dudley West Midlands Dudley 23877 **Gremlin Graphic,** Alpha House, 10 Carver Street Sheffield S1 4FS 0742 753423 **Paul Burke,** Moneymore, Oranmore Co Galway Ireland **Realtime,** Prospect House 32 Sovereign Street Leeds LS1 4BT **Reelax,** 24B Cowbridge Road, Pontyclun Mid Glamorgan 0443 229448 **Task Set,** 13 High Street Bridlington YO16 4PR 0262 673798 **Ultimate,** Ultimate Play the Game Ashy de la Zouch Leicester LE6 5JV, 0530 411485 **Vortex,** Kansas Avenue, Off South Langworthy Road Salford M5 2GL 061 872 4747

Personality test

While considerable research has been carried out to test an individual's aptitude for computer programming there have been relatively fewer investigations into the personality traits that appear to correlate with that of a good computer programmer

An investigation has recently been carried out at the Polytechnic of Central London into the 'Personality Traits of Computer orientated Individuals' in an attempt to resolve some of the ambiguities of conflicting reports in tests which have been done and to assess whether competent computer programmers do actually possess specific personality traits

It also attempted to resolve the question of whether some individuals possessed a 'Computer phobia' which made them unable to come to terms with computers at any cost.

Present day degree courses of every designation tend to some extent to involve computers whether the undergraduate likes it or not. Some students come to terms with the compulsory computing and on their course quite easily while others grind to a complete halt To ascertain what makes one individual 'computer compatible', while another will always remain inept is a crucial question when one considers the ever-increasing role computers are playing in everyone's lives. It would certainly be valid to ascertain whether some individuals are naturally computer talented, or whether given the correct tuition any person can be trained.

The method for assessment used for this investigation on the 'computer compatible personality' consisted primarily of the Eysenck Personality Inventory, a standard psychological diagnostic test used to assess an individual's tendency towards neuroticism or stability extroversion or introversion.

The assessment test was carried out on a standard BBC B which asked the subject the relevant questions, then automatically scored and graded the answers and came out with an extroversion and neuroticism rating for that subject This test was followed by a 'computer compatibility test' constructed specifically for the research project.

Subjects were ranked on a basis of high medium and low computing ability and were taken from a wide range consisting of lecturers, undergraduates and computer technicians who worked at the Polytechnic. Those subjects tested included computer talented individuals who specialised entirely in computing as well as lecturers and students who worked on non-computing subjects who confessed to be totally inept at computing

Assessment of each subject's computing ability based on factors revealed by the computer compatibility test were correlated against the scores attained by that subject on the Eysenck Personality Inventory using a Dec 10 Minitab statistics package

It was found that there was no statistically significant differences between the extroversion and neuroticism scores achieved by computing and non-computing individuals

However when the data on the subjects of computing individuals was analysed on a basis of the most and least computing talented individuals within their own group, some significant score differences appeared.

Analysis of data showed that particularly talented computer personalities tended to score at the extreme ends of the Eysenck Personality Inventory extroversion scale more often than did non-computing subjects. Whether these exceptionally computer talented high grade computing individuals scored high or low on the Eysenck Personality extroversion scale seemed to relate to the capacity in which they were involved with computers.

It was found in the high grade group that those computer talented individuals that worked behind the scenes in computing such as professional programmers for the Polytechnic and departmental technicians tended to be extremely introverted. Computer teachers and visiting service engineers tended to score high on the extroversion scale

In fact, the most talented computing individuals tested were found to possess up to 78% more extreme extroversion scores than the national average, either being more often extremely extroverted or introverted than other individuals tested

The findings of the research carried out at the Polytechnic of Central London tend to suggest that the individual more likely to achieve a successful career in computing would probably be more likely an individual with extrovert and introvert personality traits When one considers that most computer orientated careers today require one to be capable of working within a team while still possessing the confidence and ability to assert personal ideas and innovations, this might be considered reasonable

In more general terms the research report also concluded that an undergraduate of any subject could achieve relatively good computer compatibility irrespective of personality trait as measured by the Eysenck Personality Inventory

David Karliner

Puzzle No 188

The illustration shows two exactly cubical tanks with a combined volume of six cubic feet. Can you discover their dimensions?

Of course, you will argue that there is an infinite number of solutions, but the tanks in question have sides whose lengths can be expressed as finite numbers. In fact, the smaller of the two tanks has a length of side of A/B feet and the larger tank a length of side of C/B feet As a further clue each of the terms (A, B and C) are two-digit numbers and the smaller tank contains *less* than one cubic foot.

Solution to Puzzle No 184

Two numbers in which the sum of the digits times the product of the digits is equal to that number are 135 and 144 Apart from the trivial case of 1, these are the only numbers that exhibit this property under 125000

The program works by putting successive values into a string, running along the length of the string and taking at each digit in turn, find the total sum and product. These two values are then multiplied together and checked against the original number

```
10 LET N=1
20 LET N$=STR$(N)
30 LET S=0:LET P=1
40 FOR F=1 TO LEN(N$)
50 LET F$=MID$(N$,F,1)
60 LET G=VAL(F$)
70 LET S=S+G
80 LET P=P*G
90 NEXT F
100 LET P=P*S
110 IF P=N THEN PRINT N
120 LET N=N+1
130 GOTO 20
```

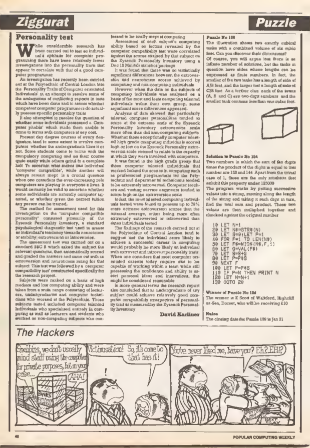
Winner of Puzzle No 184

The winner is K Scott of Walkford, Highcliff on-Sea, Dorset, who will be receiving £10

Rules

The closing date for Puzzle 188 is Jan 21

The Hackers





COSMIC
WARTOAD
SPECTRUM 48k
7·95
Free our heroine from certain death...beat the clock on the GALACTIC GUILLOTINE!
On-Screen Combat Windows speed you through the UNIVERSAL TIME-GRID.
Battle against the RYGELLIAN SLIME-BEASTS at the edge of time!
Designed by DENTON...
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Telephone 061 832 6633 · Telex 669977
Ocean Software is available from selected branches of:
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